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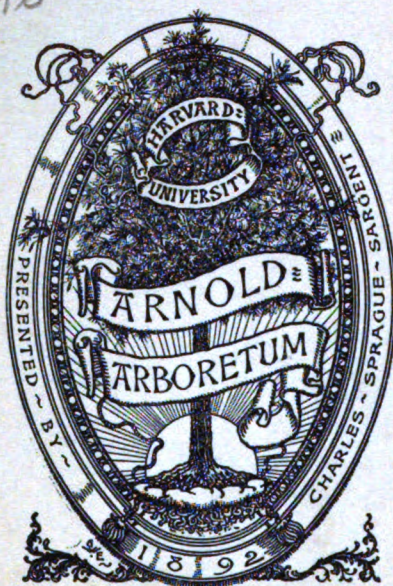
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INTERCONTINENTAL RAILWAY COMMISSION.

VOLUME I, PART II.

REPORT OF

SURVEYS AND EXPLORATIONS

—MADE BY—

CORPS No. 1 IN GUATEMALA, EL SALVADOR, HONDURAS,
NICARAGUA AND COSTA RICA.

APPENDIX III.

AN ENUMERATION

—OF THE—

Plants Collected in Central America

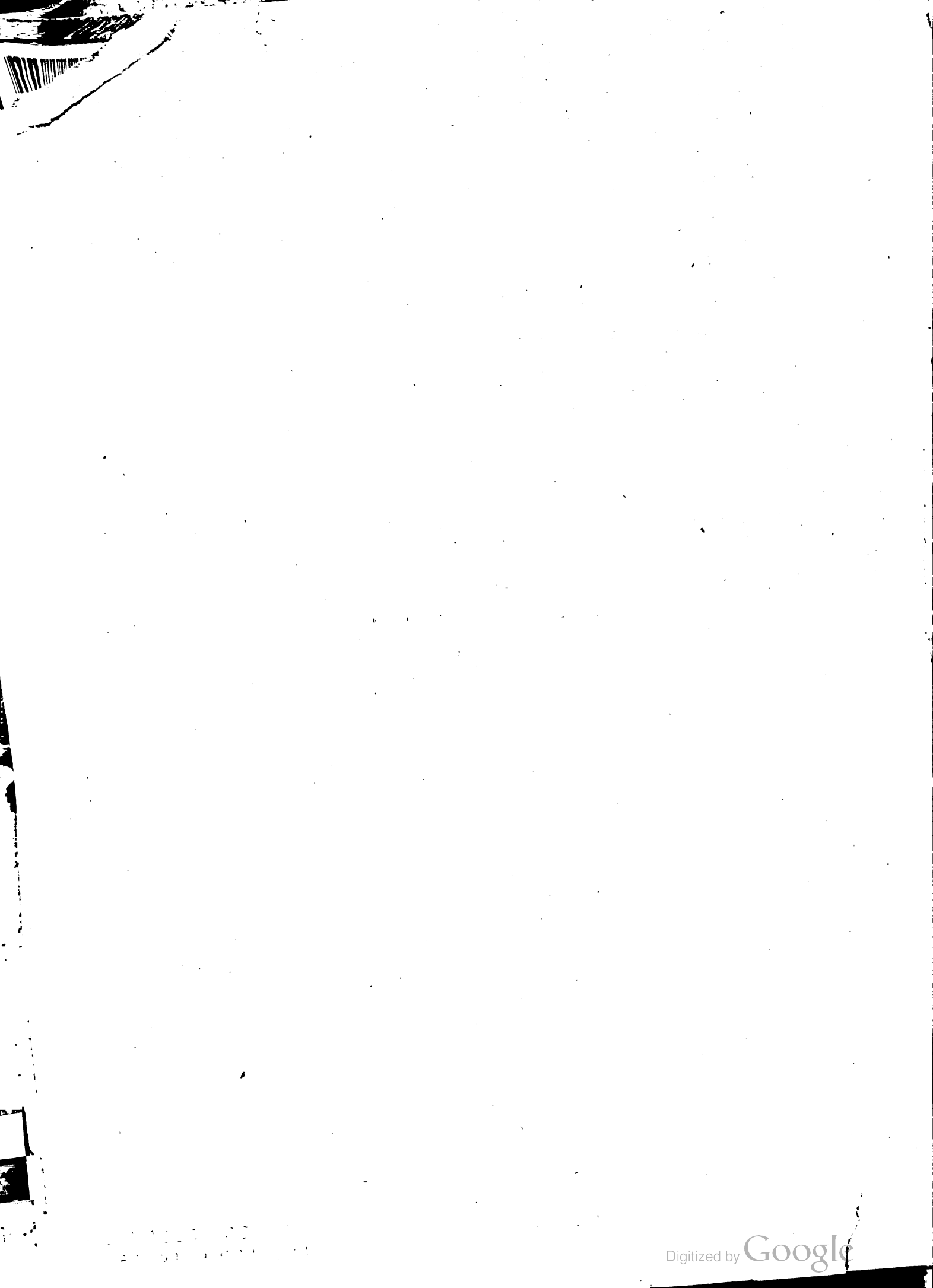
—BY—

DR. W. C. SHANNON,

ASSISTANT SURGEON, U. S. A.

JOHN DONNELL SMITH.

1891-1893.
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ENUMERATION OF SPECIES.

RANUNCULACEÆ.

CLEMATIS DIOICA, Linn. Syst. ed. X. 1084, var. BRASILIANA, Eichl. in Fl. Brasil. XIII.¹ 148. Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3599.

DILLENIACEÆ.

CURATELLA AMERICANA, Linn. Syst. ed. X. 1079.
Rivas, Depart. Rivas, Nicaragua, Mar., 1893, No. 5000. *Hacienda Ánimas*, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5001. Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5008.

ANONACEÆ.

PORCELIA NICARAGUENSIS, Benth. et Hook. f. Gen. I. 956. (*Sapranthus Nicaraguensis*, Seem. Journ. Bot. IV. 369. t. 54.)
Maniadero, Depart. Chinandega, Nicaragua, Mar., 1893, No. 5041.

PAPAVERACEÆ.

ARGEMONE MEXICANA, Linn. Sp. Pl. 727.
Guatemala City, May, 1892, No. 4700.

CAPPARIDEÆ.

GYNANDROPSIS SPECIOSA, DC. Prodr. I. 238.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 246. San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 189.

CISTINEÆ.

HELIANTHEMUM GLOMERATUM, Lag. ex DC. Prodr. I. 269.
Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 287.

VIOLARIEÆ.

VIOLA HOOKERIANA, H. B. K. Nov. Gen. et Sp. V. 369. t. 492. f. 2.
Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 361.

BIXINEÆ.

COCHLOSPERMUM HIBISCOIDES, Kunth, Syn. Pl. Æquin. III. 214.
Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5010.
BIXA ORELLANA, Linn. Sp. Pl. 730.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 179. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 109. San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 192.

POLYGALEÆ.

POLYGALA AMERICANA, Mill. Dict. ed. 8. No. 7.
Guatemala City, May, 1892, No. 4701. Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 7,000 ft., Aug., 1892, No. 3689.

CARYOPHYLLEÆ.

STELLARIA OVATA, Willd. ex Schlecht. in Ges. Naturf. Fr. Berl. Mag. (1816) 196.
Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 9,000 ft., July, 1892, No. 3639.
ARENARIA ALSINOIDES, Willd. ex Schlecht. in Ges. Naturf. Fr. Berl. Mag. (1813) 201, var. OVATIFOLIA, Donnell Smith in Botan. Gaz. XVIII. 198. (*A. lanuginosa*, Rohrb., var. *megalantha*, Rohrb. in Linnæa, XXXVII. 264.).—Rohrbach's varietal name under his later species should have been adopted, but according to best usages in nomenclature there is no reason for its substitution.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., June, 1892, No. 3635.

ARENARIA BRYOIDES, Willd. ex Schlecht. in Ges. Naturf. Fr. Berl. Mag. (1813) 201, var. *GUATEMALENSIS*, Hemsl. Diagn. Pl. Nov. 21; Biol. Centr.-Amer. Bot. I. t. IV. f. 14-18.
Bottom of crater of Volcán Tajumulco, Depart. San Marcos, Guatemala, Jan., 1892, No. 321.

HYPERICINEÆ.

HYPERICUM MEXICANUM, Linn. f. Suppl. 345.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 9,000 ft., June, 1892, No. 3626.

MALVACEÆ.

ANODA HASTATA, Cav. Diss. I. 39. t. 10. f. 3.
Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 301. Santa Teresa, Depart. Santa Rosa, Guatemala, Oct., 1892, No. 3600.
SIDA ACUTA, Burm. Fl. Ind. 147, var. *CARPINIFOLIA*, K. Schum. in Fl. Brasil. XII.³ 326.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 178. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 132.
SIDA ANOMALA, St. Hil. Fl. Brasil. Merid. I. 177. t. 33.
Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5006.
ABUTILON VENOSUM, Lem. Hortie. Univ. Misc. (1844); ex Fl. des Serres, II. (Mars, 1846) t. 5.
San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 219.
PAVONIA ROSEA, Schlecht. in Linnæa, XI. 355.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 424.
MALVAVISCUS ARBOREUS, Cav. Diss. III. 131. t. 48. f. 1.
Canibal, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 307.
MALVAVISCUS CONCINNUS, H. B. K. Nov. Gen. et Sp. 286?
Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 384.
MALVAVISCUS MOLLIS, DC. Prodr. I. 445.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 419.
HIBISCUS ABELMOSCHUS, Linn. Sp. Pl. 980.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 113.
HIBISCUS SABDARIFFA, Linn. Sp. Pl. 978.
Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 269.
GOSYPIUM BARBADENSE, Linn., Sp. Pl. 975.
Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 272.
GOSYPIUM DAVIDSONI, Kellogg in Proc. Calif. Acad. V. 82.
Río Choluteca, Depart. Choluteca, Honduras, Feb., 1893, No. 5012.
PACHIRA AQUATICA, Aubl. Pl. Guian. II. 725. tt. 291, 292.
Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 275.
CHORISIA SOLUTA, Donnell Smith in Botan. Gaz. XVI. 1.—Calyx breviter pedunculatus 3-bracteolatus lignosus cupulato-campanulatus intus aureo-lanatus, lobis 5 disparilibus. Petala lineari-spathulata ad apicem emarginata extus sericeo-tomentosa fuscaque intus glabrata coccineaque. Stamina petalis $\frac{1}{2}$ breviora, columnæ brevis ad apicem annulata lobis exterioribus ovatis integris hirsutis, ramis interioribus 10-12 filiformibus 2-antheriferis, antheris longe anfractuosius. Ovarium imperfecte 5-loculare, ovulis pyriformibus.
A tree with the gigantic trunk and flat wide-spreading head of *Bombax Ceiba*, Linn., and with digitate leaves. Calyx 20 l. high. Petals 5-6 in. x 10 l. Staminal column 10 l. high, its exterior lobes 2 l. long. The incomplete character is drawn from the only parts within reach of the collectors,—freshly fallen flowers. The staminal column partite to annulus into doubled number of branches is exceptional for the genus.
Canibal, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 311.
Collected also by Donnell Smith in Guatemala, shores of Lago Amatitlán, Depart. Amatitlán, Feb., 1890, No. 1924.
CHEIRANTHODENDRON PLATANOIDES, H. Baill. Hist. Nat. Pl. IV. 72. (*Cheirostemon platanoides*, Humb. et Bonpl.)
Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 364.

STERCULIACEÆ.

MYRODIA GUATEMALTECA, Donnell Smith in Botan. Gaz. XVI. 2.—Folia elliptica ad formam obovato-ellipticam ludentia abrupte acuminata e basi obtusa 3-nervia. Flores solitarii et geminati axillares et extra-axillares. Calycis pedicellum deflexum minute 3-bracteolatum duabus tribusve partibus superantis intus sericei lobi 5-6 inaequales ovati. Petala tomentulosa elliptico-oblonga breviter unguiculata semi-exserta. Columnæ staminalis petalis brevioris lobi 5 constanter 4-antheriferi. Ovarii loculi 2 biovulati, stigmatibus bilobato. Fructus immaturus ovatus eglandularis.
A large tree. Leaves 8-11 x 3-4½ in., minutely stellate-pubescent, at length glabrate especially beneath, costal nerves 7-9 to a side and barbellate at axils. Flowers scattered along branchlets. Calyx 1 in. long, lobes 2-3 l. long. Petals 1 in. long. Style pentagonal.
Río Bravo, Depart. Sololá, Guatemala, Oct., 1891, No. 199.

Collected also in Guatemala by Baron von Türckheim on his estate at Pansamalá, Depart. Alta Verapaz, Jan., 1889, No. 1410, and by Donnell Smith in same locality Apr., 1889, No. 1634.

BERNOUILLEA FLAMMEA, Oliv. in Hook. Icon. Pl. tt. 1169, 1170.

San Felipe, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 193.

HELICTERES GUAZUMÆFOLIA, H. B. K. Nov. Gen. et Sp. V. 304.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 419 b. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 194.

THEOBROMA CACAO, Linn. Sp. Pl. 782.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 147.

GUAZUMA ULMIFOLIA, Lam. Encyc. III. 52.

San Pedro, Depart. Choluteca, Honduras, Feb., 1893, No. 5014. Río de Las Lajas, Depart. Rivas, Nicaragua, Apr., 1893, No. 5013.

TILIACEÆ.

TRIUMFETTA ORIZABÆ, Turcz. in Bull. Soc. Imp. Nat. Mosc. XXXII.¹ 261.

San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 264.

LUEHEA ENDOPOGON, Turcz. in Bull. Soc. Imp. Nat. Mosc. XXXI.¹ 225.

Liberia, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5015.

APETBA TIBOURBOU, Aubl. Pl. Guian. I. 538. t. 213.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 208.

MALPIGHIACEÆ.

BYRSONIMA CRASSIFOLIA, H. B. K. Nov. Gen. et Sp. V. 149.

San José El Ídolo, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 99. Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5017.

MALPIGHIA GLABRA, Linn. Sp. Pl. 425, var. *ACUMINATA*, Ad. Juss. Monogr. Malpigh. 11.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 207.

MALPIGHIA DASYPARPA, Donn. Sm. in Bot. Gaz. XXIV. No. 12.—Folia juniora sparsim pilosa, adulta glabrata ovato-elliptica longe acuminata ad basin obtusa integra longiuscule petiolata, stipulis binis interpetiolaribus oblongo-ovatis. Corymbi axillares et terminales longissime pedunculati laxi, bracteis foliaceis, pedicellis brevissimis. Calyx 8-glandulosus. Petala breviter unguiculata. Filamentorum tubus partes liberas aequans. Ovarium hirsutum.

Younger leaves oblong-elliptical, at base acutish, canescent beneath on midrib and nerves, the older 15 x 7 cm., apex mucronulate; nerves 6-7 to the side, prominent beneath; petioles 8-13 mm. long; stipules canescent, 3-4 mm. long, deciduous. Peduncles 4-6 cm. long, bracts 1, 5-3 cm. long, primary axes 1-2, 5 cm. long, pedicels 4-5 mm. long. Segments of calyx orbicular-ovate, 3 mm. long, pubescent. Petals oval, with claw 2-3 mm. long added 8-10 mm. long, the interior one exceeding the others. Tube of stamens 1 m. high, anthers 2 mm. long. Ovary globose, 2 mm. in diam., equalling the styles. Fruit not present.—Distinct by the ovary from all known species.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 217.—Collected also by M. Pittier in Nicaragua, and by M. Tonduz in Costa Rica, Nos. 9653 and 8444 Herb. Nat. Costar.

BUNCHOSIA MEDIA, DC. Prodr. I. 581.

Volcán Pacaya, Depart. Amatitlán, Guatemala, July, 1892, No. 3662.

HETEROPTERIS RETUSA, Donnell Smith in Bot. Gaz. XVI. 2.—Folia latissime obovata ad apicem retusam cuspidata in basi obtusa. Panicula axillares vel terminales singulae vel 2-3-fasciculate umbellatim compositae, pedicellis in medio bracteolatis. Calyx 8-glandulosus. Petala oblonga, interioribus latioribus denticulatis ungue validiore stipitatis. Samare unicae pericarpium reticulatum, ala subascendens ad basin stylo parallela eumque superans, margine antico horizontali posteriore ascendente.

Nearly related to *H. cotinifolia*, Ad. Juss.—Branches reclinate, brachiate, lenticellate. Leaves 20-24 x 15-18 l., when young pilose on both sides, at length glabrate, veins of paler under surface rufescent and above base of lower pair uniglandular, in young leaves the glands conspicuous and stipitate; petioles terete, biglandular near apex. Panicles rufo-tomentulose, subequalling leaves; pedicels 3-5, exceeding flowers. Petals 2 l. long, twice exceeding sepals, base rounded, carinate, shortly unguiculate. Filaments exceeding calyx, anthers oblong, connective incrassate. Styles a little shorter than stamens. Samara puberulous, 1 l. long, at base 5 l. broad.

Choluteca, Depart. Choluteca, Honduras, Feb., 1893, No. 5016. Collected also by Donnell Smith at Escuintla, Depart. Escuintla, Guatemala, Mar., 1890, No. 2068.

GAUDICHAUDIA SCHIEDEANA, Ad. Juss. in Arch. Mus. Par. III. 591.

Volcán Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3660.

GERANIACEÆ.

GERANIUM MEXICANUM, H. B. K. Nov. Gen. et Sp. V. 230.

Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3653.

GERANIUM POTENTILLÆFOLIUM, DC. Prodr. I. 639.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 7,500 ft., June, 1892, No. 3654.

ERODIUM CICUTARIUM, L' Hér. ex Ait. Hort. Kew. ed. 1. II. 414.

Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 444.

- OXALIS CORNICULATA*, Linn. Sp. Pl. 435.
 Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 9,000 ft., July, 1892, No. 3640.
OXALIS DIVERGENS, Benth. Pl. Hartw. 9.
 Guatemala City, May, 1892, No. 4703.
OXALIS NEEI, DC. Prodr. I. 690.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 150. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 232. Guatemala City, May, 1892, No. 4702.

RUTACEÆ.

- CITRUS MEDICA*, Linn. Sp. Pl. 782.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1892, No. 158. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1892, No. 190.

MELIACEÆ.

- MELIA AZEDARACH*, Linn. Sp. Pl. 384.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 240.

OLACINEÆ.

- HEISTERIA ACUMINATA*, Benth. et Hook. f. Gen. I. 346; Engl. in Fl. Brasil. XII.² 14. (Char. amplif.)—
 Calyx fructiferens (adhuc carens descriptione) coccineus patulus pentagono-orbicularis pedicellum duplo drupam globosam cyaneam paululum superans; Donnell Smith, Enum. Pl. Guat. III. 18.
 Coatepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 350. Collected also in Guatemala by Donnell Smith, Barranca de Eminencia, Depart. Amatitlán, Feb., 1892, No. 2480, and Acatepeque, Depart. Sacatepéquez, Mar., 1892, No. 2479.

RHAMNEÆ.

- CRANOTHIUS AZUREUS*, Desf. Tabl. ed. II. 232.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3637.

SAPINDACEÆ.

- SERJANIA TRIQUETRA*, Radlk. Monogr. Serj. 305.
 Usulután, Depart. Usulután, Salvador, Jan., 1893, No. 5018.
CARDIOSPERMUM GRANDIFOLIUM, Sw. Prodr. Veg. Ind. Occ. 64.
 San Cristóbal Cucho, Depart. San Marcos, Guatemala, Jan., 1892, No. 400.

ANACARDIACEÆ.

- ANACARDIUM OCCIDENTALE*, Linn. Sp. Pl. 548.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 112. Chinandega, Depart. Chinandega, Nicaragua, Mar., 1893, No. 5019.

MORINGEÆ.

- MORINGA PTERYGOSPERMA*, Gaertn. Fruct. II. 314. t. 147.
 Jiquilisco, Depart. Usulután, Salvador, Jan., 1893, No. 5021. Río Choluteca, Depart. Choluteca, Honduras, Feb., 1893, No. 5020.

LEGUMINOSÆ.

Determined by M. Marc Micheli.

- CROTALARIA ANAGYROIDES*, H. B. K. Nov. Gen. et Sp. VI. 404.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 569. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 571.
LUPINUS FLABELLARIIS, Bertol. Fl. Guatim. 30.
 Volcán Tajumulco, Depart. San Marcos, Guatemala, alt. 11,000 ft., Jan., 1892, No. 568.
LUPINUS VAGINATUS, Cham. et Schlecht. in Linnaea, V. 590.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 12,000 ft., June, 1892, No. 3679.
SPARTIUM JUNCEUM, Linn. Sp. Pl. 708.
 Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 531.
INDIGOFERA MUCRONATA, Spreng. ex DC. Prodr. II. 227.
 Jutiapa, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3688.
GLIRICIDIA MACULATA, H. B. K. Nov. Gen. et Sp. IV. 393.
 Ilopango, Depart. San Salvador, Salvador, Dec., 1892, No. 5030.
DIPHYSA ROBINIODES, Benth. in Kjoeb. Vidensk. Meddel. (1853) 11.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 536.
SEBANIA MACROCARPA, Muehl. in DC. Prodr. II. 265.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 555.
SUTHERLANDIA FRUTESCENS, R. Br. in Hort. Kew. ed. 2, IV. 327.
 Tejutla, Depart. San Marcos, Guatemala, Jan., 1892, No. 539.

- ASTRAGALUS GUATEMALENSIS, Hemsl. Biol. Centr.-Amer. Bot. I. 264.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,500 ft., June, 1892, No. 3676; alt. 12,400 ft., Aug., 1892, No. 3680.
- POIRETIA SCANDENS, Vent. Choix des Pl. t. 42.
 Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3677.
- ÆSCHYNOMENE AMERICANA, Linn. Sp. Pl. 713.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 561.
- ZORNIA DIPHYLLA, Pers. Syn. II. 318.
 Volcán Flores, Depart. Jutiapa, Guatemala, alt. 2,500 ft., Oct., 1892, No. 3685. Guatemala City, May, 1892, No. 4704.
- DESMODIUM AFFINE, Schlecht. in Linnæa. XII. 312.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 526.
- DESMODIUM AMPLIFOLIUM, Hemsl. Biol. Centr.-Amer. Bot. I. 274.
 Cerro de la Laguna, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 529. Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 530.
- DESMODIUM ASPERUM, Desv. Journ. Bot. I. 122.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 528.
- DESMODIUM AXILLARE, DC. Prodr. II. 333.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 527.
- DESMODIUM INCANUM, DC. Prodr. II. 332.
 Primavera, Depart. Sololá, Guatemala, July, 1891, No. 524.
- DESMODIUM NICARAGUENSE, Griseb. in Kjoeb. Vidensk. Meddel. (1853) 16.
 Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3686.
- DESMODIUM ORBICULARE, Schlecht. in Linnæa, XII. 311.
 Volcán Acatenango, Depart. Suchitepéquez, Guatemala, alt., 7,000 ft., Aug., 1892, No. 3682.
- DESMODIUM. (*Specimen depauperatum incertae sedis.*)
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 527.
- CENTROSEMA PLUMIERI, Benth. in Ann. Wien. Mus. II. 118.
 San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 559. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 562.
- CLITORIA GUIANENSIS, Benth. in Journ. Linn. Soc. II. 40.
 La Hacha, Volcán Orosí, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5007.
- CLITORIA TERNATEA, Linn. Sp. Pl. 753.
 Mazatenango, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 556.
- COLOGANIA PULCHRELLA, H. B. K. Nov. Gen. et Sp. VI. 413.
 Volcán Acatenango, Depart. Suchitepéquez, Guatemala, alt. 8,500 ft., Aug., 1892, No. 3681. Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3687.
- ERYTHRINA GLAUCA, Willd. in Ges. Naturf. Freunde Neue Schr. III. 428.
 Lago de Nicaragua, Depart. Rivas, Nicaragua, Apr., 1893, No. 5023.
- GALACTIA MARGINALIS, Benth. in Ann. Wien. Mus. II. 126.
 Guatemala City, May, 1892, No. 4705.
- CANAVALIA OBTUSIFOLIA, DC. Prodr. II. 404.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 548.
- PHASEOLUS ANGUSTISSIMUS, A. Gray Pl. Wright. II. 33.
 Río Sapoa, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5022.
- PHASEOLUS CARACALLA, Linn. Sp. Pl. 725.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 565.
- PHASEOLUS LEPTOSTACHYUS, Benth. in Ann. Wien. Mus. II. 136.
 Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3678.
- PHASEOLUS MULTIFLORUS, Willd. Sp. Pl. 1030.
 Amatenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 541. Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3683.
- VIGNA. (*Spec. mancum.*)
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 566.
- PACHYRHIZUS ANGULATUS, Rich. in DC. Prodr. II. 402.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 563. San Francisco, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 564.
- DALBERGIA. (*Specimina juniora.*)
 Sapoa, Depart. Rivas, Nicaragua, Apr., 1893, No. 5026. Río Limón, Depart. Rivas, Nicaragua, Apr., 1893, No. 5027.
- ANDIRA EXCELSA, H. B. K. Nov. Gen. et Sp. VI. 385.
 Río Limón, Depart. Rivas, Nicaragua, Apr., 1893, No. 5025.
- CÆSALPINIA PULCHERRIMA, Sw. Obs. 166.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 554.
- CÆSALPINIA. (*Spec. mancum.*)
 Pasacuina, Depart. La Unión, Salvador, Feb., 1893, No. 5033.
- CASSIA GRANDIS, Linn. fl. Suppl. 230.
 Río Laure, Depart. Choluteca, Honduras, Feb., 1893, No. 5029.

- CASSIA OCCIDENTALIS, Linn. Sp. Pl. 377.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 575.
 CASSIA RETICULATA, Willd. Enum. Hort. Berol. 443.
 Ilopango, Depart. San Salvador, Salvador, Dec., 1892, No. 5031.
 CASSIA SKINNERI, Benth. in Trans. Linn. Soc. XXVII. 542.
 OBS. Legumen (in descriptione Benthamiana vix notum) planum, compressum, ad suturas vix incrassatas leviter sinuatum, pubens, inter semina septatum, 5-6 poll. longum.
 Jutiapa, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3684.
 CASSIA TAGERA, Linn. Sp. Pl. 376.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 546.
 CASSIA. (*Spec. mancum.*)
 Mazatenango, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 572.
 CASSIA. (*Spec. mancum.*)
 Tejutla, Depart. San Marcos, Guatemala, Jan., 1892, No. 576.
 BAUHINIA INERMIS, Pers. Syn. I. 455.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 533.
 TAMARINDUS INDICA, Linn., Sp. Pl. 34.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 535.
 MIMOSA ASPERATA, Linn. Syst. ed. X. 1312, forma minor, minus pubescens, vix varietas speciei.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 586.
 MIMOSA INVISA, Mart. Herb. Fl. Brasil. 121.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 585.
 LEUCAENA *L. glauca*, Benth., affinis.
 OBS. A *L. glauca* differt imprimis foliis paucioribus et multo majoribus; verisimiliter species nova, sed specimine unico vix evoluto accuratius non describenda.
 Cojutepeque, Depart. Cuscatlán, Salvador, Dec., 1892, No. 5032.
 ACACIA FILICINA, Willd. Sp. Pl. IV. 1072.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 584.
 ACACIA SPADICIGERA, Gham. et Schlecht. in Linnæa, V. 594.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 578.
 CALLIANDRA MAGDALENÆ, Benth. in Hook. Lond. Journ. Bot. V. 102.
 Patulul, Depart. Sololá, Guatemala, Aug., 1891, No. 545.
 PITHECOLOBIUM UNGUIS-CATI, Benth. in Hook. Lond. Journ. III. 200.
 San Pedro, Depart. Choluteca, Honduras, Feb., 1893, No. 5028.
 PITHECOLOBIUM. (*Spec. mancum.*)
 Cojutepeque, Depart. Cuscatlán, Salvador, Dec., 1892, No. 5032.
 INGA MICRADENIA, Spruce, ex Benth. in Trans. Linn. Soc. XXX. 620.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 557.

ROSACEÆ.

- HIRTELLA RACEMOSA, Lam. Encyc. III. 133. (H. Americana, Aubl. Pl. Guian. 247. t. 98; Linn. Sp. Pl. 34?)
 Hacienda Ánimas, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5034.
 RUBUS TRILOBUS Moc. et Sessé, Fl. Mex. Icon. ined. in DC. Prodr. II. 566, var. GUATEMALENSIS, Focke in Bot. Gaz. XVIII. 201.—Ramuli petioli cum foliorum recentiorum pagina inferiori leviter pubescentes quam in planta typica minus pilosi. Folia quam in illa latiora breviter trilobata, lobo terminali ad basin saepe latiore quam longiore, lobis lateralibus perbrevibus seu indistinctis.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3631.
 POTENTILLA HETEROSEPALA, Fritsch in Engl. Botan. Jahrb. XI. 314.
 Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 368.
 ALCHEMILLA ORBICULATA, Ruiz et Pav. Fl. Peruv. I. 68.
 Volcán Tajumulco, Depart. San Marcos, Guatemala, alt. 9,000 ft., Jan., 1892, No. 323.
 CYDONIA VULGARIS, Pers. Syn. II. 40.
 Amatenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 317.

CRASSULACEÆ.

- SEDUM BICOLOR, H. B. K. Nov. Gen. et Sp. VI. 45?
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 9,000 ft., June, 1892, No. 3633.

COMBRETACEÆ.

- COMBRETUM ERIANTHUM, Benth. Pl. Hartw. 73. (Char. amplif.)—Samaræ (adhuc ignotæ) distincte pedicellatæ fuscæ glanduloso-lepidotæ et simul pubescentes late ovales (8 x 6 l.) utrinque emarginatæ, corpore lineari-lanceolato profunde et argute 4-lobato, alis quam lobi latioribus scariosis transversim striolatis.
C. argenteum, Bertol. and *C. Benthamianum*, Heurck et Muell. Arg. do not appear *ex char.* to be distinct from the above. *C. Warsceviczianum* from Nicaragua, only partially characterized by Eichler (Fl. Brasil. XIV.² 110

in observ.), is a related species; fragments of the original in the Berlin Herbarium have been kindly communicated by Dr. Taubert, and differ by indument of branchlets and rachis simply tomentose, of calyx and ovary more conspicuously scaly than tomentose; leaves oval, each end obtuse, minutely albo-lepidote, above soon glabrate; calyx tubulous-campanulate; petals nearly equalling calyx-lobes, orbicular, broader than long.

Tecoluca, Depart. San Vicente, Salvador, Jan., 1893, No. 5039.

COMBRETUM FARINOSUM, H. B. K. Nov. Gen. et Sp. VI. 110.

Tecoluca, Depart. San Vicente, Salvador, Jan., 1893, No. 5038.

MYRTACEÆ.

COUROUPITA NICARAGUENSIS, DC. Prodr. III. 294.

Rfo Ochomogo, Depart. Rivas, Nicaragua, Mar., 1893, No. 5004.

MELASTOMACEÆ.

Determined by Prof. A. Cogniaux.

CENTRADENIA FLORIBUNDA, Planch. in Fl. des Serres, V. t. 453.

San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 513.

CENTRADENIA BERNOLLI, Cario in Herb. ex Cogn. in DC. Monogr. Phaner. VII. 118.

Cojutepeque, Depart. Cuscatlán, Salvador, Feb., 1893, No. 5035.

HEERIA AXILLARIS, Cogn. in DC. Monogr. Phaner. VII. 138.

Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 521.

ARTHROSTEMMA FRAGILE, Lindl. in Journ. Hort. Soc. III. 74.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 486.

PTEROLEPIS TRICHOTOMA, Cogn. in Mart. Fl. Bras. XIV. 261.

Rfo Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 502.

TIBOUCHINA BOURGÆANA, Cogn. in Bot. Gaz. XVI. 4; (§ DISTANTHERA); ramis setis arcte adpressis basi tuberculatis subsparse armatis; foliis mollibus, anguste lanceolatis, longiuscule acuminatis, basi satis attenuatis, subtiliter serrulatis, utrinque adpresse pilosis, 5-nerviis, nervis lateralibus basi longiuscule coalitis; cymis plurifloris; calycis tubo ovoideo, lobis subulatis, tubo brevioribus; staminibus omnino glabris, subaequalibus; antheris brevibus, oblongis, apice obtusis, connectivo basi brevissime producto.—Rami graciles, erecti. Petiolus 0.5-1.5 cm. longus. Folia 4-8 cm. longa, 8-17 mm. lata. Calycis tubus 2.5 mm. longus; lobi 1.5-2 mm. longi. Petala lilacina, ciliata, apice setoso-apiculata, 4-5 mm. longa. Antherae 1.5 mm. longae. Stylus 4 mm. longus.

San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 513 b. Collected also in Guatemala by Donnell Smith, Yzabal, Depart. Yzabal, Apr., 1889, No. 1514; Masagua, Depart. Escuintla, Apr., 1890, No. 2211; San Felipe, Depart. Retalhuleu, Apr., 1892, No. 2648; and by Heyde & Lux, Santa Rosa, Depart. Santa Rosa, May, 1892, No. 3331.

TIBOUCHINA SCHIEDANA, Cogn. in DC. Monogr. Phaner. VII. 261.

San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 515.

MONOCHÆTUM DEPPEANUM, Naud. in Ann. Sc. nat. sér. 3, XIV. 165.

San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 509. Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 9,000 ft., July, 1892, No. 3667.

MONOCHÆTUM TENELLUM, Naud. in Ann. Sc. nat. sér. 3, XIV. 159.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 522.

CONOSTEGIA VIRIDIS, Cogn. in Bot. Gaz. XX. 286; ramis junioribus petiolis pedunculis calycibusque densiuscule furfuraceo-puberulis; foliis membranaceis, ovatis, breviuscule acuminatis, basi rotundatis vel subemarginatis, acute minuteque duplicato-dentatis ciliatisque, 5-plinerviis fere 5-nerviis, supra tenuissime punctato-furfuraceis et breviter sparseque setosis, subtus ad nervos nervulosque leviter stellato-furfuraceis ceteris glabris; floribus 5-meris, subsessilibus; alabastris anguste ovoideis, obtusiuscule acuminatis.—Rami robustiusculi, obscure tetragoni. Petiolus 2.5-3.5 cm. longus. Folia supra intense viridia, subtus late viridia, 10-13 cm. longa, 6-7 cm. lata, nervis nervulisque subtus satis prominentibus. Panicula corymbiformes, multiflorae, fere 1 dm. longae. Alabastra cinerea, 6-7 mm. longa, 4 mm. crassa. Petala oblique obovata, 5 mm. longa. Antherae oblongae, subrectae, fere 2 mm. longae. Stylus crassus, 5 mm. longus, stigmatem non dilatato. Fructus nigricans, depresso-subglobosus, 5-6 mm. crassus.—Species *C. subcrustulata*, Triana (Cogn. in DC. Monogr. Phan. VII. 709) proxima, sed foliis 5-plinerviis, etc.

San Felipe, Depart. Retalhuleu, Guatemala, Apr., 1892, Donnell Smith, No. 2650.

VAR. ANGUSTIFOLIA, Cogn. l. c. 287.—Petiolus 5 cm. longus. Folia oblonga, distincte 5-plinervia, basi acuta vel subacuta, 17 cm. longa, 6-6.5 cm. lata.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 487.

CONOSTEGIA XALAPENSIS, D. Don in Mém. Wern. Soc. IV. 317, forma *canescent*.

San Felipe, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 497.

HETEROTRICHUM OCTONUM, DC. Prodr. III. 173.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 519 b.

LYTHRARIÆ.

- CUPHEA EQUIPETALA*, Cav. Icon. IV. 57. t. 382. f. 2, var. *HISPIDA*, Kœhne in Engl. Bot. Jahrb. II. 411.
 Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., Aug., 1892, No. 3657.
CUPHEA HOOKERIANA, Walp. Rep. II. 107, forma *foliosa*, Kœhne in Donnell Smith, Enum. Pl. Guat. III. 29.
 Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 283.
CUPHEA UTRICULOSA, Kœhne in Mart. Fl. Brasil. XIII.² 222, var. *Donnell-Smithii*, Kœhne in Bot. Gaz. XVIII. 203.—Differt a var. *a* et *β* foliis angustis, in ramis sterilibus linearibus, in fertilibus lineari-lanceolatis, præcipue vero calyce intus infra stamina in nervis omnibus villosiusculo. Flores ceterum ut in var. *a*; rami ut in var. *Panamensi*, Hemsl. vestiti; fructus calycem æquans, quare stylus brevis totus exsertus.
 Primavera, Depart. Sololá, Guatemala, July, 1891, No. 403. Collected also by Donnell Smith in Costa Rica, Río Virilla, Prov. San José, Mar., 1894, No. 4809.
LYTHRUM ACTINIFOLIUM, Moç. et Sessé, Fl. Mex. Icon. ined., in DC. Prodr. ut *L. alati* synonym., forma *grandifolium*, Kœhne in Engl. Bot. Jahrb. I. 322.
 Differt ab exemplaribus adhuc notis floribus paullo majoribus, petalis violaceis; Kœhne in Donnell Smith, Enum. Pl. Guat. III. 30.
 Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 291.
LAFOENSIA PUNICIFOLIA, DC. in Mém. Soc. Hort. Genève. III.² 86. t. 1.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 277.

ONAGRARIÆ.

- JUSSIEUA PERUVIANA*, Linn. Sp. Pl. 555, var. *GLABERRIMA*. Donnell Smith in Botan. Gaz. XVI. 6.—Frutex biorgyalis prorsus glaber. Pedunculus cum calyce nitidus. Sepali mucronati denticulati. Corolla 2 poll. diam. Stamina 8, antheris oblongis filamenta æquantibus. Capsula elongata.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 252. Collected also by Donnell Smith, swamp near Dueñas, Depart. Sacatepéquez, Guatemala, Apr., 1890, No. 2130.
ENOTHERA CUPREA, Schlecht. in Linnaea, XII. 269.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3625. Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 12,500 ft., Aug., 1892, No. 3620.
ENOTHERA ROSA, Ait. Hort. Kew. II. 3.
 Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 443. Guatemala City, No. 4706.
ENOTHERA FISSIFOLIA, Steud. Nom. II. 206. (*Æ. micrantha*, Walp.)
 Patzún, Depart. Chimaltenango, Guatemala, Apr., 1892, No. 356.
ENOTHERA. (Spec. insufficient for determination.)
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,500 ft., June, 1892, No. 3623.
FUCHSIA ARBORESCENS, Sims, Bot. Mag. t. 2620.
 San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 265. Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 391.
FUCHSIA MINUTIFLORA, Hemsl. Diag. Pl. Nov. 15; Biol. Centr.-Amer. t. XXVIII. f. 3.
 Serchil, Depart. San Marcos, Guatemala, Jan., 1892, No. 328.
FUCHSIA PARVIFLORA, Zucc. in Abh. Akad. Muench. II. 337.
 Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 7,000 ft., Aug., 1892, No. 3656.
FUCHSIA MIXTA, Hemsl. Diagn. Pl. Nov. I. 15; Biol. Centr.-Amer. t. XXVIII. f. 2.
 Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 9,000 ft., June, 1892, No. 3655.
LOPEZIA HIRSUTA, Jacq. Coll. V. t. 15. f. 4.
 San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 262.
LOPEZIA MACROPHYLLA, Benth. Pl. Hartw. 83.
 Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3469.

SAMYDACEÆ.

- CASHEARIA SYLVESTRIS*, Sw. Fl. Ind. Occ. II. 752.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 148.

TURNERACEÆ.

- TURNERA ULMIFOLIA*, Linn. Sp. Pl. 271.
 Ilopango, Depart. San Salvador, Salvador, Dec., 1892, No. 5036. Tecoluca, Depart. San. Vicente, Salvador, Jan., 1893, No. 5037.

PASSIFLORACEÆ.

- PASSIFLORA CORIACEA*, Juss. in Ann. Mus. Par. VI. 109. t. 39. f. 2.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 274.
PASSIFLORA MACROCARPA, Mast Gard. Chron. (1869) 1012.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 447.
CARICA PAPAYA, Linn. Sp. Pl. 1466.
 Santa Bárbara, Depart. Sololá, Guatemala, July, 1891, No. 138. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 115. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 159.

CUCURBITACEÆ.

Determined by Prof. A. Cogniaux.

MOMORDICA CHARANTIA, Linn. Sp. Pl. 1009.

Tepetitán, Depart. San Vicente, Salvador, Jan., 1893, No. 5040.

LUFFA CYLINDRICA, Rcem, Syn. Fasc. II. 63.

Santa Bárbara, Depart. Sololá, Guatemala, July, 1891, No. 480.

CITRULLUS VULGARIS, Schrad. ex Eckl. et Zeyh. Enum. 279.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 230.

PITTIERA GRANDIFLORA, Cogn. ined. (*Cayaponia grandiflora*, Cogn. in DC. Monogr. Phaner. III. 779.)

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 270.

BEGONIACEÆ.

Determined by M. Casinir de Candolle.

BEGONIA GLANDULOSA, A. DC. Prodr. XV.¹ 339?

Cuyotenango, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 279.

BEGONIA LUXII, C. DC. in Botan. Gaz. XX. 541; foliis mediocribus modice petiolatis transverse ovato-acuminatis basi inaequali cordatis margine serrulatis supra ad paginam subtusque ad nervos pilosulis palmati-6-nerviis, petiolo glabro apice imo subtus fimbriato, inflorescentia florente pauciflora cum pedunculo quam folium brevior fructifera eum paulo superante bracteis caducis ellipticis, fl. masc. sepalis 2 rotundatis cum petalis 2 obovatis integris glabris antheris ellipticis quam filamenta brevioribus, fl. fem. 3-lobi lobis exterioribus rotundatis cum interno ellipticis integris glabris, capsula oblongo-elliptica glabra 2-loculari 2-3-alata alis subaequalibus quarum maxima transverse parum elongata tertia minima vel nulla.

Suffrutex circiter 30 cm. altus radice fibrosa caule lignoso adulto fistuloso ad nodos tumido inferne inter nodos 3 mm. crasso. Caulis fasciculi intramedullares in nodis nonnulli. Folia alterna, limbi in sicco tenuiter membranacei pellucidi ad 11 cm. longi ad 5 cm. lati stomatibus ellipticis sparsis. Petioli ad 5 cm. longi in sicco tenues. Inflorescentiae fructiferae pedunculus 5 cm. longus. Floris masculi stamina libera numerosa antheris glabris rimis longitudinalibus dehiscens. Floris feminei bracteolae ovatae caducae, stili 3 caduci liberi 2-fidi laciniis spiralliter papilliferis, ovarium 3-loculare, placentae 2-partitae lamellis utrinque ovuliferis. Capsula abortu 2-locularis.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 7,000 ft., June, 1892, No. 3627. Collected also by Heyde & Lux at San Miguel Uspantán, Depart. Quiché, Guatemala, alt. 6,000 ft., Apr., 1892, No. 3095.

BEGONIA e sectione *Gireondia*, A. DC.

San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 186.

BEGONIA e sectione *Gireondia*, A. DC.

San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 215.

UMBELLIFERÆ.

ARRACACIA DONNELL-SMITHII, Coult. et Rose in Botan. Gaz. XV. 261. t. XV.—Glabrous below, puberulent above, 15 to 18 dm. high: leaves (lower ones not seen) with long sheathing petioles, 2 or 3-ternate then pinnate; pinnate segments with 5 to 11 leaflets which are narrowly lanceolate, acuminate, sharply and finely serrate, 2.5 to 7.5 cm. long, lower surface puberulent to glabrate; petioles with a dense ring of soft hairs at base; peduncles 7.5 to 10 cm. long; rays puberulent, about equal, 3.5 to 5 cm. long; flowers white, with small calyx-teeth; fruit abundant, on pedicels 2 mm. long, ovate, glabrous, 6 mm. long, with small conical stylopodium.—From the locality, here is to be referred *Arracacia* sp. No. 12 of Hemsley's list in Biol. Centr.-Amer., specimens now in herb., Kew, collected by Salvín and Godman. Mr. Smith makes the following note: "No. 2196 is a plant occupying in abundance the zone of Volcán de Agua from 10,000 to 11,000 feet, associated with another endemic and equally conspicuous plant, *Lupinus flabellaris*."

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., June, 1892, No. 3663. Collected also by Donnell Smith in same locality, Apr., 1890, No. 2196.

RUBIACEÆ.

RONDELETIA STRIGOSA, Hemsl. Biol. Centr.-Amer. Bot. II. 24.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 12,400 ft., Aug., 1892, No. 3614.

LINDENIA RIVALIS, Benth. Pl. Hartw. 84.

Río Guacalate, Depart. Escuintla, Guatemala, July, 1892, No. 3646.

MALLOSTOMA SHANNONI, Donnell Smith in Botan. Gaz. XVIII. 203.—Caulis ad nodos radicanter tetragoni, stipulis ovatis 3-setosis vel setis lateralibus ad dentes glandulares reductis, petiolis in alam pubescentem decurrentibus. Folia ovalla vel elliptico-oblonga contermina obtusa acutave coriacea cum caulibus rubro-punctata, nervo costali subtus margineque revoluta pubescentibus, venis utrinque immersis. Flores terminales solitarii 4-meri. Calycis lobi triangulari-lanceolati tubum turbinatum aut pedunculum ebracteatum subaequiparantes, sinibus truncatis glandulo-denticulatis. Corollae infundibularis lobi tubo parum breviores ovato-oblongi intus paleaceo-pubescentes, faucibus nudis. Capsula obovata superne plus minus libera 8-costata ad verticem loculicide ad basin septicide dehiscens, seminibus 8-20 compressis subrotundis.

Cespitose with long prostrate stems, "forming a carpet-like turf" (Shannon). Stipules $\frac{1}{2}$ l. long, from tumid nodes. Leaves $2\frac{1}{2}$ -4 x 1-2 l., often clustered, petioles short and flat. Flowers 5 l. long. Calyx-lobes 1 l. long. Filaments $\frac{1}{2}$ and style $\frac{1}{2}$ as long as tube. Stigma large subglobose. Capsule 2 l. long. Seeds $\frac{1}{2}$ l., finely punctulate, black, shining.—Nearest to *M. setosa*, Benth. et Hook., and especially to the form or var. (*Archiphyllum setosum*, Schlect. in *Linnaea*, XXVIII. 489) *ex char.*

Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 371. Collected also in Guatemala by Heyde & Lux, San Miguel Uspantán, Depart. Quiché, Apr., 1892, No. 3176.

GONZALEA PANAMENSIS, Pers. Syn. I. 133.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 222.

GONZALEA SPICATA, DC., Prodr. IV. 437.

Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 241.

HAMELIA PATENS, Jacq. Enum. Pl. Carib. 16.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 130. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 202. Río Bravo, Depart. Sololá, Guatemala, Oct., 1891, No. 391.

ALIBERTIA EDULIS, A. Rich. in Mém. Soc. Hist. Nat. Par. V. 234. t. 21.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 121.

PSYCHOTRIA. (Spec. insufficient for determination.)

Guatemala City, May, 1892, No. 4707.

CRUSEA CALOCEPHALA, DC. Prodr. IV. 567.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 227.

SPERMATOCOE ECHIOIDES, H. B. K. Nov. Gen. et Sp. III. 344.

Cuyotenango, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 184.

SPERMATOCOE LEVIS, Lam. Ill. n. 1435. t. 94. f. 2.

Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 93.

COMPOSITÆ.

Determined by Prof. John M. Coulter.

VERNONIA SALVINÆ, Hemsl. Biol. Centr.-Amer. Bot. II. 73, t. XLI.*

Coatepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 347.

VERNONIA SHANNONI, Coult. n. sp. ined.

San Lorenzo, Depart. San Marcos, Guatemala, Jan., 1892, No. 605.

AGERATUM CONYZOIDES, Linn. Sp. Pl. 839.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 600.

STEVIA SALICIFOLIA, Cav. Icon. Pl. IV. 32. t. 354.

San Andrés, Depart. Totonicapam, Guatemala, Nov., 1891, No. 613.

CARMINATIA TENUIFLORA, DC. Prodr. VII. 267.

Chingo, Depart. Jutiapa, Guatemala, Oct., 1893, No. 3694.

EUPATORIUM TUERCKHEIMII, Klatt in Leopoldina, XX. 95.

Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 604.

APLOPAPPUS STOLONIFERUS, DC. Prodr. V. 349, var. GLABRATUS, Coulter in Bot. Gaz. XVI. 98.—Leaves glabrate, not all "very hirsute" as in the type.

Volcán Acatenango, Depart. Suchitepéquez, Guatemala, alt. 14,400 ft., Aug., 1892, No. 3690. Volcán de Agua, Depart. Suchitepéquez, Guatemala, alt. 12,400 ft., June, 1892, No. 3697. Collected also in the latter locality by Donnell Smith, Apr., 1890, No. 2328.

BACCHARIS RHIZOIDES, H. B. K. Nov. Gen. et Sp. IV. 66.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 592.

BACCHARIS VACUINIODES, H. B. K. Nov. Gen. et Sp. IV. 50, *ex char.*

Serchil, Depart. San Marcos, Guatemala, Jan., 1892, No. 606.

BALTIMORA SCOLOPOSPERMUM, Steetz in Seem. Bot. Voy. Herald, 154.

Patulul, Depart. Sololá, Guatemala, Aug., 1891, No. 590.

MELAMPEDIUM PALUDOSUM, H. B. K. Nov. Gen. et Sp. IV. 273.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 595.

ZALUZANIA RESINOSA, Watson in Proc. Am. Ac. XXV. 153.

Calel, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 612.

SCLEROCARPUS DIVARICATUS, Benth. et Hook. Gen. Pl. II. 364.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 588. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 593. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 602.

TITHONIA SPECIOSA, Benth. et Hook. Gen. Pl. II. 375.

San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 596.

MELANTHERA OXYLEPIS, DC. Prodr. V. 545.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 589.

SYNEDRELLA VIALIS, A. Gray in Proc. Am. Ac. XVII. 217.

Guatemala City, May, 1892, No. 4709.

DAHLIA VARIABILIS, Desf. Cat. Hort. Par. ed. III. 182.

Huahuá, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 609.

DAHLIA. (Spec. insufficient for determination.)

San Martín, Depart. Quezaltenango, Guatemala, Dec., 1891, No. 599.

- COEMOS CRITHMIFOLIUS, H. B. K. Nov. Gen. et Spec. IV. 242.
 Amatenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 608.
 BIDENS HETEROPHYLLA, Orteg. Hort. Matr. 99, t. 12.
 San Carlos, Depart. Quezaltenango, Guatemala, Dec., 1891, No. 597.
 BIDENS OSTRUTHIOIDES, Sch. Bip. in Seem. Bot. Voy. Herald, 308.
 Cael, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 611.
 BIDENS PILOSA, Linn. Sp. Pl. 832.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 594. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 601.
 BIDENS. (Spec. insufficient for determination.)
 Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3696 b.
 TAGETES SUBULATA, Llav. et Lex. Nov. Veg. Deser. I. 31.
 Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3696.
 TAGETES TENUIFOLIA, Cav. Icon. Pl. II. 54, t. 169.
 San Carlos, Depart. Quezaltenango, Guatemala, Dec., 1891, No. 598.
 WERNERIA NUBIGENA, H. B. K. Nov. Gen. et Sp. IV. 151.
 Volcán Tajumulco, Depart. San Marcos, Guatemala, alt. 13,743 ft., Jan., 1892, No. 607.

LOBELIACEÆ.

- CENTROPOGON CORDIFOLIUS, Benth. Pl. Hartw. 77.
 San Martín, Depart. Totonicapam, Guatemala, Nov., 1891, No. 267.
 LOBELIA LAXIFLORA, H. B. K. Nov. Gen. et Sp. III. 311.
 Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 290.

ERICACEÆ.

- ARBUTUS VARIANS, Benth. Pl. Hartw. 77.
 Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 292.
 PERNETTYA CORIACEA, Klotzsch in Linnæa, XIV. 85?
 Volcán Tajumulco, Depart. San Marcos, Guatemala, alt. 11,000 ft., Jan., 1892, No. 322.

MYRSINEÆ.

- ARDISIA PELLUCIDA, Erst. in Kjøeb. Vidensk. Meddel. 130. t. 2. ff. 39-43.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 170.
 ARDISIA VENOSA, Masters in Botan. Gaz. XVIII. 205.—Arbuscula, foliis crassiusculis ellipticis vel obovato-oblongis integris, basi in petiolum latum brevem angustatis, apice breviter abrupteque acuminatis, nervo medio superne sulcato subtus prominente, venis numerosissimis confertis reticulatim divisim, versus marginem arcuatis; cymis paniculatis pyramidatis amplis laxe ramosis, ramis patentibus, (cum pedicellis fasciculatim dispositis), pilis glandulosis dense obsitis; calycis breviter tubulati sepalis ovato-lanceolatis purpureo-maculatis; corollæ 4 mm. long. tubo subventricoso, petalis æstivatione contortis oblongis acutis sepalis duplo longioribus; filamentis versus basin tubi inter tuberculos parvos emergentibus petalis dimidio brevioribus; antheris flavis demum basi cordato-bilobis, apice longe apiculatis, pollinis cellulis sphaericis; stylo corollam æquante vel superante.—Folia 20-25 cm. long., 7-8 cm. lat. Petiolus 2 cm. "Arbuscula gracilis 12-15 ped. fl. rubris albo-marginatis flavo-ocellatis."
 Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 369. Collected also in Guatemala by Donnell Smith on the eastern slopes of Volcán Acatenango, Depart. Sacatepéquez, Mar., 1892, No. 2485; and by Heyde & Lux at Santa Rosa, Depart. Santa Rosa, Mar., 1892, No. 3021.
 JACQUINIA AXILLARIS, Erst. in Kjøeb. Vidensk. Meddel. (1861) 121.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 229.

APOCYNACEÆ.

- ASPIDOSPERMA MEGALOCARPON, Muell. Arg. in Linnæa, XXX. 400.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 209.
 VINCA ROSEA, Linn. Syst. ed. X. 944.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 233.
 TABERNÆMONTANA DONNELL-SMITHII, Rose in Botan. Gaz. XVIII. 206.—Large shrub 10 to 20 ft. high, glabrous; leaves 3 to 8 in. long, 1 to 1½ in. broad, thin, oblong, tapering at base, abruptly long-acuminate, glabrous, entire, sessile or short-petioled; cymes with a few large flowers; bracts at base of flowers, 3, broad and obtuse; calyx 5-parted, the two outer ones much shorter, the inner ones 8 l. long, 5 l. broad, obtuse, scales in the axil of the sepals numerous; corolla yellow, with broad obtuse lobes; tubes 12 to 14 l. long, a little swollen at the top; stamens inserted near the middle of the tube; disk prominent; style long; follicles 2, reflex, oblong and obtuse, 1½ to 2 in. long by 1 to 1½ in. broad; seeds numerous, oblong, 4 to 5 l. long.—Near *T. grandiflora*, but the follicles of this latter species are acuminate, the leaves evergreen, and the bracts and sepals different. Captain Smith observes of this plant: "It is not exactly a tree in habit. It occurred everywhere I went, from the coast up to the slopes of the volcanoes at an elevation of 5,000 ft. The

natives call it *copal* (varnish gum).'' *T. grandiflora*, as is known, was referred by Miers to *Semmadenia*, but is retained by Mr. Hemsley in *Tubernaemontana*. The difference between these two genera is sometimes a little difficult to determine. My species has certainly the salver-form corolla of *Tubernaemontana*.

Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 120. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 152. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 155. Collected also in Guatemala by Donnell Smith, Depart. Escuintla, Mar., 1890, No. 2404; San Juan Mixtán, Apr., 1890, No. 2405; Naranjo, Mar., 1892, No. 2764; San José, Apr., 1892, No. 2765; Depart. Amatitlán, Barranca de Eminencia, Feb., 1892, No. 2762; Depart. Retalhuleu, San Felipe, Apr., 1892, No. 2763.

STEMMADENIA MOLLIS, Benth. Bot. Voy. Sulph. 125.
(Liberia, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5042.)

ECHITES. (Spec. insufficient for determination.)

Río Bravo, Depart. Sololá, Guatemala, Sept., 1891, No. 60.

MANDEVILLA MORITZIANA, Donnell Smith, Enum. Pl. Guat. III. 50. (*Amulyanthera Moritziana*, Muell. Arg. in Linnæa, XXX. 421?)

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 251. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 218.

ASCLEPIADEÆ.

PHILIBERTIA CRASSIFOLIA, Hemsl. Biol. Centr.-Amer. Bot. II. 318.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 169. Río Najualé, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 399.

ASCLEPIAS CURASSAVICA, Linn. Sp. Pl. 215.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 143. San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 188.

ASCLEPIAS ROSEA, H. B. K. Nov. Gen. et Sp. III. 189.
Guatemala City, May, 1892, No. 4710.

LOGANIACEÆ.

SPIGELIA HUMBOLDTIANA, Cham. et Schlecht. in Linnæa, I. 200.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 70. Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 71. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 392.

GENTIANEÆ.

HALENIA GRACILIS, Griseb. Gen. et Sp. Gent. 327.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3630. Volcán de Agua, alt. 12,400 ft., Aug., 1892, No. 3613.
LIMNANTHEMUM HUMBOLDTIANUM, Griseb. Gen. et Sp. Gent. 347.
Guatemala City, May, 1892, No. 4711.

POLEMONIACEÆ.

LOESLIA GLANDULOSA, Don, Gen. Syst. IV. 248.
Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 288.

BORAGINEÆ.

CORDIA ALBA, Roem. et Schult. Syst. IV. 466.
Socorro, Depart. San Vicente, Salvador, Jan., 1893, No. 5043.
CORDIA GERASCANTHUS, Linn. Sp. Pl. Syst. ed. X. 936.
Tecoluca, Depart. San Vicente, Salvador, Jan., 1893, No. 5044.
ECHINOSPERMUM MEXICANUM, Hemsl. Biol. Centr.-Amer. Bot. II. 377.
Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 362.
LITHOSPERMUM DISTICHUM, Ortega, Hort. Matr. Dec. 8.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 9,000 ft., June, 1892, No. 3629.

CONVOLVULACEÆ.

IPOMÆA ARBORESCENS, G. Don, Gen. Syst. IV. 267?
Culco, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 415.
IPOMÆA BONA-NOX, Linn. Sp. Pl. 228.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 405. Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 412 b.
IPOMÆA COCCINEA, Linn. Sp. Pl. 228.
Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3606.

- IPOMÆA FASTIGIATA*, Sweet, Hort. Brit. ed. I. 228.
 San Andrés, Depart. Retalhuleu, Guatemala, Nov., 1891, No. 414. Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5045.
- IPOMÆA FISTULOSA*, Mart. ex Choisy in DC. Prodr. IX. 349, var. *NICARAGUENSIS*, Donnell Smith in Botan. Gaz. XIX. 256.—Frutex biorgyalis, foliis late cordiformibus acuminatis discoloribus supra pubescentibus subtus cano-velutinis. Petioli superne biglanduliferi. Sepala pubescentia orbicularia. Corolla ad 3-4-pollicaris. Semina flavo-comosa.
 Río de Las Lajas, Depart. Rivas, Nicaragua, Apr., 1893, No. 5046.
- IPOMÆA MURUCOIDES*, Rœm. et Schult. Syst. IV. 248.
 Canibal, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 417.
- IPOMÆA TUBEROSA*, Linn. Sp. Pl. 227.
 Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 408. San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 409.
- JACQUEMONTIA VIOLACEA*, Choisy in Mém. Soc. Phys. Genève. VIII.¹ 61.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 268.
- JACQUEMONTIA VIOLACEA*, Choisy in Mém. Soc. Phys. Genève. VIII.¹ 61, var. *GUATEMALENSIS*, Meisn. in Fl. Brasil. VII. 296.
 Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3610.
- EVOLVULUS ALMINOIDES*, Linn. Sp. Pl. 392.
 Guatemala City, May, 1892, No. 4712. Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3608.
- CUSCUTA CORYMBOSA*, Ruiz et Pav. Fl. Peruv. I. 69, var. *GRANDIFLORA*, Engelm. in Trans. St. Louis Acad. I. 483.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 75.

SOLANACEÆ.

Determined by Prof. John M. Coulter.

- SOLANUM ALIGERUM*, Schlecht. in Linnæa, XIX. 301, *ex char.*
 Río Blanco, Depart. San Marcos, Guatemala, Jan., 1892, No. 669. Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3619.
- SOLANUM DONNELL-SMITHII*, Coult. in Botan. Gaz. XVI. 143.—Said to be a vine, more or less rough with stellate hairs; prickles stout and subulate or recurved, yellowish, especially stout on the stem, usually more slender on the midrib and principal veins, copious or scanty; leaves rather large and membranaceous, oblong or ovate, sinuate-toothed or lobed, or even entire, 7-15 cm. long, with equally 4 to 6-rayed hairs below, and central division much elongated in the otherwise shorter-rayed hairs above; the simple loose few-flowered racemes or cymes soon lateral; calyx deeply 5-cleft, with stout often bulbous-dilated prickles and mostly long-acuminate lobes; corolla 2.5 cm. or more in diameter, whitish or light blue, deeply parted into lance-linear lobes, which are thickly stellate-pubescent without; anthers linear-lanceolate; the smooth globose berries becoming 1.5 to 2 cm. in diameter, turning red.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 623. Collected also by Donnell Smith in Guatemala, Depart. Escuintla, Nos. 2261, 2262, 2268; Depart. Retalhuleu, Nos. 2670, 2671; also in Costa Rica, Comarca de Limón, No. 4896.
- SOLANUM LENTUM*, Cav. Icon. Pl. t. 308.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 621. Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 668.
- SOLANUM MAMMOSUM*, Linn. Sp. Pl. 187.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 616.
- SOLANUM MAZATENANGENSE*, Coult. n. sp. ined.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 624.
- SOLANUM NIGRUM*, Linn. Sp. Pl. 186.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 620.
- SOLANUM TORVUM*, Sw. Prodr. Veg. Ind. Occ. 47.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 617. Primavera, Depart. Sololá, Guatemala, July, 1891, No. 622.
- CAPRICUM BACCATUM*, Linn. Mant. I. 46.
 Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 206. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 236.
- BRACHISTUS ESCUINTLensis*, Coult. in Botan. Gaz. XVI. 143.—Glabrous throughout or minutely puberulent; leaves large and thin, ovate (often broadly so), acute or acuminate, usually oblique at base and more or less tapering into a petiole, entire or with a slightly wavy margin, very unequal in size, the largest becoming 20 to 23 cm. long and 12 to 13 cm. broad; flowers on pedicels of various lengths in umbellate axillary clusters along the main stem or on leafy branches; the short and broadly campanulate calyx with an entire margin (rarely a few almost undistinguishable teeth); corolla about 12 mm. long, with 5 erect lobes 4 or 5 mm. long; berry globose, 8 to 9 mm. in diameter.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 619. San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 651. Collected also by Donnell Smith, Escuintla, Depart. Escuintla, Guatemala, Mar., 1890, No. 2267.

- Datura stramonium*, Linn. Sp. Pl. 179.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 139.
Cestrum aurantiacum, Lindl. Bot. Reg. XL. Misc. 71.
Chimante, Depart. Totonicapam, Guatemala, June, 1892, No. 3643.
Cestrum nitidum, Mart. et Gal. in Bull. Acad. Brux. XII. II. (reimpr. 19).
Calel, Depart. Totonicapam, Guatemala, Dec., 1891, No. 282.
Nicotiana tabacum, Linn. Sp. Pl. 180.
Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 296.

SCROPHULARINEÆ.

- Penstemon gentianoides*, Don, Gen. Syst. IV. 639.
Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 11,000 ft., Aug., 1892, No. 3617.
Russelia sarmentosa, Jacq. Am. Select. 178. t. 113.
Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 271.
Berendia rugosa, A. Gray in Proc. Am. Acad. VII. 380.
Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 289.
Hemichena fruticosa, Benth. Pl. Hartw. 78.
San Cristóbal Cucho, Depart. San Marcos, Guatemala, Jan., 1892, No. 339.
Escobedia scabrifolia, Ruiz et Pav. Syst. Veg. 159.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3818.
Buchnera mexicana, Hemsl. Biol. Centr.-Amer. Bot. II. 457.
Amatenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 314.
Buchnera pilosa, Benth. Bot. Voy. Sulph. 144.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3652.
Gerardia peduncularis, Benth. in Hook. Comp. Bot. Mag. t. 209.
Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., Aug., 1892, No. 3651.
Castilleja pectinata, Mart. et Gal. in Bull. Acad. Brux. XII. 27.
Calel, Depart. Totonicapam, Guatemala, Dec., 1891, No. 281. **Volcán Tajumulco**, Depart. San Marcos, Guatemala, alt. 7,000 ft., Jan., 1892, No. 318. **Los Encuentros**, Depart. Sololá, Guatemala, June, 1892, No. 3647.
Castilleja tenuiflora, Benth. Pl. Hartw. 22.
San Carlos Sija, Depart. Totonicapam, Guatemala, Dec., 1891, No. 285.

LENTIBULARIÆ.

- Pinguicula caudata*, Schlecht. in Linnaea, VII. 393.
San Pedro, Depart. San Marcos, Guatemala, Jan., 1892, No. 329.

GESNERACEÆ.

- Achimenes longiflora*, DC. Prodr. VII. 536.
Primavera, Depart. Sololá, Guatemala, July, 1891, No. 175. **Escuintla**, Depart. Escuintla, Guatemala, July, 1892, No. 3641.
Heppiella ovata, Klotzsch et Hanst. in Linnaea, XXIX. 512.
San Cristóbal Cucho, Depart. San Marcos, Guatemala, Jan., 1892, No. 335.
Isooma longifolium, Decne. in Rev. Hort. Sér. III. 465.
San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 263.
Drymonia spectabilis, Mart. Nov. Gen. et Sp. III. 59.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 395.
Columnnea glabra, Erst. in Vidensk. Selsk. Skr. V. 136.
Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 89.
 GESNERACEA. (Spec. insufficient for determination.)
Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 95.

BIGNONIACEÆ.

- Arrabidaea patellifera*, K. Schum. in Engl. & Prantl. Nat. Pflanzenfam. IV. Abt. 3 b. 213.
Cuajiniquilapa, Depart. Santa Rosa, Guatemala, Oct., 1892, No. 3602.
Distictis rovirosana, Donnell Smith in Botan. Gaz. XX. 7.
 Folia recentiora stellato-canescens, adulta præter petiolos longos et nervos glabrata, foliis oblongo-obovatis ad formam ovalem vel oblongo-ovatum ludentibus caudato-acuminatis, basi 3-5-nervia plerumque retusa. Thyrsi incani angustifoliis recentioribus bracteati in paniculam terminalem amplam dispositi, cymulis 3-chotomis. Calyx anguste campanulatus, dentibus mucronatis. Corolla recta campanulato-infundibuliformis. Discus lator quam altior. Ovuli in utraque placenta 4-seriati. Capsula ecarinata glandulis magnis maculata ceterum glabra, seminibus in utroque loculo 15-18.
 Trunk very stout, procumbent; branches scandent, striate, glandular-pubescent. Petioles 2-4 in. long; leaves 3-foliate, or conjugate with a simple tendril, 4-6 x 2½-3 in.; terminal petiole ¾-1½ in. long, 2-3 times exceeding the lateral. Thyrsi stellate-tomentulose, often undeveloped and corymbiform; bractlets linear, 2-4 l. long.

Calyx velvety, $2\frac{1}{2}$ -3 l. long. Corolla velvety, roseate, $1\frac{1}{2}$ -2 in. long; contracted tube twice exceeding calyx, pubescent within; lobes subequal, subovate, 7-9 l. long, pubescent within. Stamens inserted at contracted base of corolla, nearly attaining throat, anther-cells divaricate. Disk $\frac{1}{2}$ l. high, twice broader, somewhat cupulate. Ovary oval, lepidote, ovules 7-9 in each series. Capsule ligneous, oblong, $3\frac{1}{2}$ x $1\frac{1}{2}$ in., acuminate, base rounded, valves thick, septum marked near margins with irregularly biseriate linear hila; seeds pubescent, suborbicular, 7-9 l. long, with wing added oblong and 2 x 1 in.—Very distinct from *D. elongata*, Bur. and *D. Mansoana*, Bur. (No. III, 50 ex herb. Brasil. Regnell.), the only species that have been referred to *Distichis* as limited by Bureau.

Papelón, Depart. Choluteca, Honduras, Feb., 1893, No. 5052; Río Limón, Depart. Rivas, Nicaragua, Apr., 1893, No. 5053; Río Sapoá, Depart. Rivas, Nicaragua, Apr., 1893, No. 5054. Collected also by Prof. José N. Rovirosa near Atasta, Tabasco, Mexico, May, 1889, No. 488; and by Donnell Smith at Obero, Depart. Escuintla, Guatemala, Mar., 1892, No. 2689.

AMPHILOPHIUM PANICULATUM, H. B. K. Nov. Gen. et Sp. III. 149.

Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3603.

CYDISTA EQUINOCTIALIS, Miers in Proc. Roy. Hort. Soc. III. 191.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 118.—*Forma* (*Bignonia sarmentosa*, Bertol.), Tecoluca, Depart. San Vicente, Salvador, Jan., 1893, No. 5055.—*Forma* (*B. spectabilis*, Vahl), Liberia, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5048. Sapoá, Depart. Rivas, Nicaragua, Apr., 1893, No. 5049.

TECOMA sp.?—Folia in exemplaribus suppetentibus desunt. Inflorescentia floribus in capitulum cum calyce densissime aureo-floccosum glomeratis insignis.

Río de Las Lajas, Depart. Rivas, Nicaragua, Apr., 1893, No. 5050.

COURALIA ROSEA, Donnell Smith. (*Tecoma rosea*, Bertol. Fl. Guatim. 25; *Tubebuia rosea*, DC. Prodr. IX. 215, § *Couralia*.)

Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5047.

STENOLOBIUM STANS, Seem. Journ. Bot. I. 88.

Lago Ilopango, Depart. San Salvador, Salvador, Dec., 1892, No. 5056.

ACANTHACEÆ.

THUNDERBORGIA ALATA, Boj. in Bot. Mag. t. 2591.

Cuyotenango, Depart. Suchitepéquez, Guatemala, Oct., 1891, No. 163.

RUELLIA ALBICAULIS, Spreng. Syst. II. 282.

Santa Cruz, Depart. Cuscatlán, Salvador, Dec., 1892, No. 5058.

RUELLIA HOOKERIANA, Hemsl. Biol. Centr.-Amer. Bot. II. 505.

Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5059.

RUELLIA LACTEA, Cav. Icon. Pl. III. 28. t. 255.

Guatemala City, May, 1892, No. 4713.

RUELLIA PANICULATA, Linn. Sp. Pl. 635.

Río San Bernardo, Depart. Choluteca, Honduras, Feb., 1893, No. 5057.

BLECHUM BROWNEI, Juss. in Ann. Mus. Par. IX. 270.

Río San Bernardo, Depart. Choluteca, Honduras, Feb., 1893, No. 5060.

ANDROCENTRUM MULTIFLORUM, Lem. in Fl. des Serres, Sér. I. III. 242.

Palo Blanco, Depart. Chinandega, Nicaragua, Mar., 1893, No. 5005.

APHELANDRA PECTINATA, Willd. ex Nees in DC. Prodr. XI. 297.

Patulul, Depart. Sololá, Guatemala, Aug., 1891, No. 154.

DIANTHERA INÆQUALIS, Benth. et Hook. f. Gen. II. 113.

San Martín, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 258.

JACOBINIA AUREA, Hemsl. Diagn. Pl. Nov. 35; Biol. Centr.-Amer. Bot. t. 68.

Retalhuleu, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 160. San Felipe, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 161.

THYRSACANTHUS STRICTUS, Nees in DC. Prodr. XI. 324, forma evolutior. (*Justicia corymbulosa*, Bertol. Fl. Guatimal. 57)

Coatepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 346.

ACANTHACEA. (Spec. insufficient for determination.)

Amatenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 313.

VERBENACEÆ.

LANTANA CAMARA, Linn. Sp. Pl. 627.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 69. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 100.

LANTANA HIRSUTA, Mart. et Gal. in Bull. Acad. Brux. XI. 326.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 200.

LANTANA VELUTINA, Mart. et Gal. in Bull. Acad. Brux. XI. 325.

Guatemala City, May, 1892, No. 4715.

LIPPIA DULCIS, Trevir. in Act. Acad. Nat. Cur. XII. 187.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 134.

STACHYTARPHETA DICHOTOMA, Vahl, Enum. I. 207.

Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3605.

- STACHYTARPHETA JAMAICENSIS, Vahl, Enum. 206.
 Guatemala City, May, 1892, No. 4716.
 PRIVA ECHINATA, Juss. in Ann. Mus. Par. VII. 69.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 247.
 VERBENA POLYSTACHYA, H. B. K. Nov. Gen. et Sp. II. 274.
 Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 9,000 ft., July, 1892, No. 3638.
 CORNUTIA GRANDIFOLIA, Schauer in DC. Prodr. XI. 682.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 135.
 CLERODENDRON FRAGRANS, Vent. Jard. Malm. t. 70.
 Mazatenango, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 180. Arrazola, Depart. Guatemala, Sept., 1892, No. 3609.

LABIATÆ.

- HYPTIS LILACINA, Cham. et Schlecht. in Linnaea, V. 101.
 Volcán Flores, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3604.
 SALVIA CINNABARINA, Mart. et Gal. in Bull. Acad. Brux. Sér. 1. XI. 2 63.
 San Carlos Sija, Depart. Totonicapam, Guatemala, Dec., 1891, No. 261.
 SALVIA LABIANTHA, Benth. Labiat. Gen. et Sp. 276.
 San Carlos Sija, Depart. Totonicapam, Guatemala, Dec., 1891, No. 260.
 SALVIA LINDENII, Benth. in DC. Prodr. XII. 333.
 San Martín, Depart. Quezaltenango, Guatemala, Nov., 1891, No. 266.
 SALVIA SHANNONI, Donnell Smith in Botan. Gaz. XIX. 256. (‡ CALOPHACE.)—Suffrutex cano-pubescent.
 Folia ovato-lanceolata sensim acuminata ad basin acuta obtusave serrulata discoloria supra scabriuscula subtus cum petiolis velutina, floralia subconformia contractius acuminata flores superantia. Racemorum breviter pedunculorum verticillastra coarctata 6-14-flora, infima subremota. Calycis subsessilis tubuloso-campanulati labia late ovata, posticum integrum, anticum acute dentatum. Corolla quam calyx duplo fere longior ad medium subæqualiter labiata, tubo gracili vix ventricoso subexserto, labii inferioris lobo medio reniformi bifido. Stylus superne unilateraliter fimbriatus.
 Leaves 3-4 x 1½-1¾ in., petioles 6-8 l. long. Racemes 3-5 in. long; bracts sessile, herbaceous, pubescent, purplish, persistent, 8-10 x 4-5 l. Calyx pubescent, virescent or colored, 5 l. long, lips 1½ l. long. Corolla blue, 8 l. long, nearly glabrous galea 3 l. long; lip pubescent on back, 4 l. long, middle lobe 1½ x 3 l. Filament produced at articulation; anterior branch of connective 1½ l. long, not dilated, glabrous, dentate. Inferior lobe of style ½ l. long, the superior thrice longer.
 Slopes of Volcán Chingo, Depart. Jutiapa, Guatemala, alt. 3,000 ft., Oct., 1892, No. 3612.
 MARSYPIANTHES HYPTOIDES, Mart. in Benth. Labiat. Gen. et Sp. 64.
 Guatemala City, May, 1892, No. 4717.
 LEONURUS SIBIRICUS, Linn. Sp. Pl. 584.
 Soyapango, Depart. San Salvador, Salvador, Dec., 1892, No. 5061.

NYCTAGINEÆ.

- OXYBAPHUS VIOLACEUS, Choisy in DC. Prodr. XIII. 2 432.
 Guatemala City, May, 1892, No. 4718.
 BOURGAINVILLEA SPECTABILIS, Willd. Sp. Pl. II. 348, var. (*B. glabra*, Choisy in DC. Prodr. XIII. 2 437.)
 Santa Ana, Depart. Santa Ana, Salvador, Nov., 1892, No. 5002.

AMARANTACEÆ.

- CELOSIA CRISTATA, Linn. Sp. Pl. 205.
 Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 156.
 AMARANTHUS HYBRIDUS, Linn. Sp. Pl. 990.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 127.
 GOMPHRENA GLOBOSA, Linn. Sp. Pl. 224.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 171.
 IRESINE CELOSIODES, Linn. Sp. Pl. ed. II. 1456.
 Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3611. Cojutepeque, Depart. Cuscatlán, Salvador, Dec., 1892, No. 5062.

PHYTOLACCACEÆ.

- RIVINA HUMILIS, Linn. Sp. Pl. 121.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 82.
 PETIVERIA ALLIACEA, Linn. Sp. Pl. 342.
 Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 224.
 PHYTOLACCA ICOSANDRA, Linn. Syst. ed. X. 1040.
 Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 357.
 PHYTOLACCA OCTANDRA, Linn. Sp. Pl. ed. II. 631.
 Cotepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 349.

POLYGONACEÆ.

POLYGONUM PUNCTATUM, Ell. Sketch. I. 455.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 223.

ANTIGONON GUATEMALENSE, Meisn. in DC. Prodr. XIV. 184.

Triunfo, Depart. Usulután, Salvador, Jan., 1893, No. 5063. Jutiapa, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3607.

TRIPLARIS MACOMBII, Donnell Smith in Botan. Gaz. XIX. 257.—Folia pedalia oblique lateque elliptico-ovata abrupte acuminata ad basin late rotundata glabrata subtus rubro-punctulata, margine pilosiusculo, costa subtus adpresse pilosa. Racemi (qurum soli feminei suppetunt) singuli aut bini aut terni ex summis axillis orti itidem in paniculam terminalem folia superantem congesti. Calycis fructiferentis lobi exteriores quam tubus oblongus altero tanto longiores linguiformes, sinuum late rotundatorum marginibus retroflexis, lobi interiores tubum subequantes eique $\frac{1}{2}$ -adnati setaceo-subulati ad basin plus minus appendiculati. Nucule nitidæ quam tubus $\frac{1}{2}$ brevioris facies ovatæ, stylis fauces haud attingentibus.

Branchlets smooth, sulcate, verrucose at nodes. Leaves membranaceous, undulate, inequilateral, 10–13 x 6–7 in.; caudate acumination blunt, 5 l. long; nervation immersed above, salient beneath, 17–19 lateral nerves straight and uniting in arches remote from margin, reticulation minute, longitudinal impressions nearly obsolete; petiole 8–11 l. long. Panicle densely flavo-sericeous, rachis flexuose; racemes densely flowered from near base, 8–12 in. long; bracts persistent, acuminate-ovate, margins continuing united below, within plurinerved and colored; pedicels as long (4 l.), deflexed. Calyx of matured fruit 26 l. long, pale-yellow; tube appressed-villose, 9 x 3 l.; wings sparsely pilose, 17 x 5 l., obtuse, narrowed toward base; interior lobes somewhat unequal, about 3 l. long. Nutlet 5 x 3 $\frac{1}{2}$ l., styles 2 l. long.—Most nearly related to *T. auriculata*, Meisn. and *T. Arnotiana*, Meisn., the originals of which in the Meisner herbarium of Columbia College have been compared.

Jiquilisco, Depart. Usulután, Salvador, Jan., 1893, No. 5064.

PODOSTEMACEÆ.

MARATHRUM FÆNICULATUM, Humb. et Bonpl. Pl. Æquin. 40. t. 10.

Río Bravo, Depart. Sololá, Guatemala, Sept., 1891, No. 57.

PIPERACEÆ.

Determined by M. Casimir de Candolle.

PIPER MEDIUM, Jacq. Icon. Pl. Rar. I. 2. t. 8.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 775.

PEPEROMIA LINDENIANA, Miq. in Versl. en Med. Kon. Akad. Wetench. II. 259.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 773.

PEPEROMIA NUMMULARIFOLIA, H. B. K. Nov. Gen. et Sp. I. 66.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 773 b.

LAURINEÆ.

NECTANDRA GLOBOSA, Mez. in Eichl. Jahrb. Berl. V. 415.

Triunfo, Depart. Usulután, Salvador, Jan., 1893, No. 5003.

LORANTHACEÆ.

PHORADENDRON RUBRUM, Griseb. Fl. Brit. W. Ind. 314.

Río de Las Lajas, Depart. Rivas, Nicaragua, Apr., 1893, No. 5065.

EUPHORBIACEÆ.

PEDILANTHUS MACRADENIUS, Donnell Smith in Botan. Gaz. XIX. 263. (§ *EUPEDILANTHUS*, Boiss.)—Folia glabra ampla obovato-oblonga angulo obtusissimo terminantia, basi obtusa. Cymæ ex axillis supremis ortæ breves oligocephalæ, bracteis oblongo-ovatis pedunculos superantibus. Involucrum ad basin rectangulare, calcaris quam tubus paullo minoris deflexi glandulas 2 majusculas gerentis labiis ovatis sub apice plica intrusa auctis, tubi lobis binis inferioribus ovatis cano-fimbriatulis, superiore cum intermediis aequilongis alte connato. Bracteolæ numerosissimæ flores masculos aequantes, pedicellis masculis et femineo filamentisque glabris. Capsula depresso-sphaerica lineis dehiscentiæ 6 latis albis notata.

Arboreous. Leaves olive-green, at apex of branchlets 4–6 x 2–3 in.; petioles smooth, 3 l. long. Bracts pubescent beneath hoary pubescence, 6 x 3 l. Peduncles pubescent. Involucre pubescent, smooth within, 5–6 l. long, spur 3 $\frac{1}{2}$ x 2 l. with oval glands 1 l. long, tube 4 x 3 l. Capsule 4 l. in diam., cocciules ecarinate, seeds trigonal-globose.

Canibal, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 412.

PEDILANTHUS TITHYMALOIDES, Poit. in Ann. Mus. Par. XIX. 390. t. 19.

Hacienda Ánimas, Prov. Guanacasté, Costa Rica, Apr., 1893, No. 5011.

EUPHORBIA PULCHERRIMA, Willd. ex Klotzsch, in Otto et Dietr. Allg. Gartenz. II. 27.

San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 185.

EUPHORBIA LEUCOCEPHALA, Lotsy in Botan. Gaz. XX. 350. t. 24. (§ *ALEKTOROCOTONUM*, DC. Prod. 15²: 59.)—Frutex glabra juventute lanosa, ramis striatis ad articulationes incrassatis. Folia inferiora verticillata, cetera plerumque ternata vel rarius verticillata; folia longe petiolata, inferiora obovata, superiora oblonga apice mucronata. Dichasia terminalia polycephala. Bractea alba spathulata mucronata involucris triplo vel quadruplo longiora. Cyathia basi externe biglandulata, involucris breve pedicellatis campanulatis hirtis, lobis transverse oblongis ciliatis. Glandulae quinae transverse oblongae, appendicibus integerrimis eis 6-plo longioribus. Stili bipartiti. Capsula glabra profunde trisulcata. Semen ecarunculatum.

Shannon's note says: "Rather a vinelike shrub that grows generally near another plant and overtops the companions. Plant 60 cm. -2.1 m. high."

Leaves pinnately veined, veins fourteen to sixteen, covered with extremely few hairs on both sides, rather more along the midrib. Some of the leaves turning red, at least in herbarium specimens. Inflorescence remarkable for its numerous white bracts, which has suggested the specific name of *leucocephala*. Very few of the cyathia have female flowers. Dried styles persistent on top of capsule. Seeds, not entirely ripe, with a dried funiculus, which suggests sometimes a small shriveled carunculus. Blade of lower leaves 6-8 cm. long, at broadest place about 3.5 cm. wide. Petiole 2-2.5 cm. long. Ternate leaves 3-4 cm. long, at broadest place 1.5-2 cm. wide. Bracts 1-1.5 cm. long. Capsule about 0.5 cm. long and equally broad.

Culico, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 305. Slopes of Volcán Chingo, Depart. Jutiapa, Guatemala, alt. 4,000 ft., Oct., 1892, No. 3661. Collected also by Heyde & Lux, Río Negro, Depart. Quiché, Guatemala, Mar., 1892, No. 3482; Patzitzia, Depart. Chimaltenango, Guatemala, Feb., 1893, No. 6377.

PHYLLANTHUS LAXIFLORUS, Benth. Pl. Hartw. 90.

Alotenango, Depart. Sacatepéquez, Guatemala, Aug., 1892, No. 3650.

JATROPHA URENS, Linn. Sp. Pl. 1007, var. *GENUINA*, Muell. Arg. in DC. Prodr. XV.² 1,100.

Guatemala City, May, 1892, No. 4719.

CROTON CILIATO-GLANDULIFERUS, Ortega Hort. Matr. 51.

Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3659.

CROTON. (Spec. insufficient for determination.)

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 140.

URTICACEÆ.

DORSTENIA CONTRAJERVA, Linn. Sp. Pl. ed. II. 176, var. *HOUSTONI*, Bureau in DC. Prodr. XVII. 259. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 97.

CUPULIFERÆ.

OSTRYA VIRGINICA, Willd. Sp. Pl. IV. 469.

Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 7,000 ft., Aug., 1892, No. 3621.

QUERCUS SKINNERI, Benth. Pl. Hartw. 90.

Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 7,000 ft., Aug., 1892, No. 3648.

CONIFERÆ.

CUPRESSUS LINDLEYI, Klotzsch ex Endl. Syn. Conif. 59.

Guatemala City, May, 1892, No. 4720.

PINUS (§ *PSEUDOSTROBUS*) *DONNELL-SMITHII*, Mast. in Botan. Gaz. XVI. 199; XIX. 13. t. 2.—Arbor altitudine mediocris vel humilis; ramulis crassis asperatis; squamis fulcrantibus 10-12 mm. long. subcoriaceis castaneis lanceolatis longe acuminatis margine laciniato-fimbriatis, fimbriis ascendentibus vix intertextis; fasciculis dense approximatis 5-phyllis basi vaginatis, vaginis circa 12 mm. long. e squamis lanceolatis pluribus constantibus, squamis infimis subcoriaceis ad margines integris sursum paulatim increscentibus, squamis mediis ad margines albidis longe fimbriatis, fimbriis horizontaliter divergentibus intertextis fasciculum obvolvuntibus, squamis summis hyalinis integris; foliis circa 13 cm. long. 1 mm. et ultra lat. rigidis triquetris ad angulos serrulatis apice subulatis, canalibus resiniferis parvis paucissimis sub epidermide positissimis? vel nullis; stomatibus in utroque latere per series 6-7 dispositis; amentis masculis pluribus ad apices ramulorum capitatim-aggregatis, singulis 25-30 mm. long. 5-7 mm. lat. erectis vel ascendentibus rectis cylindricis obtusiusculis basi bracteis subcoriaceis castaneis suffultis, bracteis infimis margine albedo-fimbriatis, bracteis summis margine integris abido-limbatis; antherarum connectivis suborbicularibus erosis aurantiaco-purpureis; amentis femininis pedunculo deflexo crasso impositis, curvatis cylindricis; squamarum apophysis valde prominentibus deflexis carnosio-coriaceis irregulariter sub-5-angulatis carina transversa brevi notatis, medio depressis, umbone lato deltoideo deflexo; strobilis adultis pendulis circa 10 cm. long. 6-7 cm. lat. cylindricis-oblongis apice obtuse conoideis, (squamis autem siccitate a sese separatis strobilus ovoideo-subglobosus evadit); squamis lignoso-coriaceis crassiusculis apophysis circa 10 mm. long. 16 mm. lat. rhomboideis sub-pyramidalis apice cum umbone excentrico reflexis; seminibus circa 2 cm. long. 5 mm. lat. superne alatis, ala membranacea pallide fusca angusta oblonga margine hinc paulo crassiore recta illinc tenuiore falcatim curvata.—De hac specie insigni et, ut videtur, hactenus indescripta, nec non strobilorum squamarumque notis valde distincta ita in litt. scribit oculatissimus repertor: "Abunde occurrit versus cacumen montis, et etiam ad ejus culmen,

ad alt. 12,300 ped. ubi autem arbor pumila 10-12 ped. tantum evadit." Cl. Godman etiam qui hanc speciem loco eodem observabit abhinc annos triginta tradit hancce arborem cingulam circa montem efficere ad alt. 10,000 ped. usque ad culmen aliis arboribus nullis intermixtis. In opere laudato auspiciis cl. Godman edito et a sollerte Hemsley confecto, cui nomen Biologia Centrali-Americana, vol. iii, arbor haecce orbiter injecta est, nomine tamen et descriptione omnino praetermissis.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 12,400 ft., June, 1892, No. 3622. Collected also by Donnell Smith in same locality, Apr., 1890, No. 2182.

"PINUS. *n sp?*" (Masters).

Volcán Fuego, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., Aug., 1892, No. 3616.

PINUS. (*Spec. mancum.*)

Chimiente, Depart. Totonicapam, Guatemala, June, 1892, No. 3642.

ORCHIDEÆ.

Determined by Prof. A. Cogniaux.

BLETIA CAMPANULATA, Llave et Lex. Nov. Veg. Descr. fasc. II, Orch. Opusc. 16.

Chiantla, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 286. Cuilco, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 312.

EPIDENDRUM ATROPURPUREUM, Willd. Sp. Pl. IV. 115.

Lago de Nicaragua, Depart. Rivas, Nicaragua, Apr., 1893, No. 5067.

EPIDENDRUM LINDLEYANUM, Reichb. fil. in Walp. Ann. VI. 375.

Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 462.

EPIDENDRUM RADICANS, Pav. in Lindl. Gen. and Sp. Orch. Pl. 104, et Fol. Orch. n. 220.

Coatepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 448.

LELIA ANCEPS, Lindl. Bot. Reg. t. 1751.

Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 470.

SCHOMBURGKIA TIBICINIS, Batem. in Bot. Reg. XXIV. Misc. Note 8.

Llanos de Sapoá, Prov. Guanacaste, Costa Rica, Apr., 1893, No. 5066.

ODONTOGLOSSUM PULCHELLUM, Batem. in Bot. Reg. XXVII. t. 48.

Amatenango, Mexico, Dec., 1891, No. 450. Cerro de la Laguna, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 451. Colotenango, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 475.

SPIRANTHES. (*Spec. mancum.*)

San Lorenzo, Depart. San Marcos, Guatemala, Jan., 1892, No. 449.

ORCHIDEA. (*Spec. mancum.*)

Canibal, Depart. Huehuetenango, Guatemala, Dec., 1891, No. 452.

SCITAMINEÆ.

Determined by Mr. J. G. Baker.

HEDYCHIUM CORONARIUM, Koen. in Retz. Obs. III. 73.

Chocolá, Depart. Suchitepéquez, Guatemala, July, 1892, No. 3645.

ZINGIBER OFFICINALE, Rosc. Monandr. t. 83.

San Sebastián, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 216.

COSTUS SPICATUS, Sw. Prodr. Veg. Ind. Occ. 11.

Santa Bárbara, Depart. Sololá, Guatemala, July, 1891, No. 137.

MARANTA ARUNDINACEA, Linn. Sp. Pl. 2.

Patulul, Depart. Sololá, Guatemala, Aug., 1891, No. 153.

CALATHEA INSIGNIS, Peters. in Fl. Brasil. III. 124.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 111. Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 166.

CALATHEA VIOLACEA, Lindl. Bot. Reg. (1834) sub. t. 932; 962.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 397.

CANNÆ INDICÆ, Linn. Sp. Pl. 1, SUBSPECIES.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 173. Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 221.

CANNA. (*Spec. insufficient for determination.*)

BROMELIACEÆ.

BROMELIA PINGVIN, Linn. Sp. Pl. 285.

Liberia, Prov. Guanacaste, Costa Rica, Apr., 1892, No. 5068.

HÆMODORACEÆ.

XIPHIDIUM FLORIBUNDUM, Sw. Prodr. Veg. Ind. Occ. 17.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 68.

IRIDEÆ.

Determined by Mr. J. G. Baker.

RIGIDELLA sp.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3624.

NEMASTYLIS TRIFLORA, Herb. in Benth. Pl. Hartw. 95?

Los Encuentros, Depart. Sololá, Guatemala, June, 1892, No. 3666.

SISYRINCHIUM TENUIFOLIUM, Humb. et Bonpl. ex Willd. Hort. Berol. t. 92.

Guatemala City, May, 1892, No. 4723. Valle de Quiché, Depart. Quiché, Guatemala, June, 1892, No. 3644.

AMARYLLIDEÆ.

Determined by Mr. J. G. Baker.

HYPOXIS DECUMBENS, Linn. Pl. Jam. Pugill. 11.

Guatemala City, May, 1892, No. 4721.

CRINUM ERUBESCENS, Soland. in Ait. Hort. Kew. ed. 1. I. 413.

Río Samalá, Depart. Retalhuleu, Guatemala, Oct., 1891, No. 213. Lago de Amatitlán, Depart. Amatitlán, Guatemala, May, 1892, No. 4724.

CRINUM. N. sp. (?) *C. erubescens*, Ait., proxima.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 404.

BOMAREA ACUTIFOLIA, Herb. Amaryll. 112.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 8,000 ft., June, 1892, No. 3632.

BOMAREA EDULIS, Herb. Amaryll. 111.

Volcán Acatenango, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., Aug., 1892, No. 3615.

LILIACEÆ.

SMILACINA FLEXUOSA, Bertol. in Nov. Com. Acad. Bonon. IV. 411. t. 39.

Volcán de Agua, Depart. Sacatepéquez, Guatemala, alt. 10,000 ft., June, 1892, No. 3634.

SMILACINA SALVINI, Hemsl. Biol. Centr.-Amer. Bot. III. 368.

San Carlos, Depart. Quezaltenango, Guatemala, Dec., 1891, No. 439. Chichoy, Depart. Chimaltenango, Guatemala, Mar., 1892, No. 358.

COMMELINACEÆ.

Determined by Mr. C. B. Clarke.

COMMELINA NUDIFLORA, Linn. Sp. Pl. I. 61.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 770.

COMMELINA PALLIDA, Willd. Hort. Berol. II. 87. t. 87?

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 772.

COMMELINA VIRGINICA, Linn. Sp. Pl. ed. II. 61.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 694.

DICHORISANDRA THYRSIFLORA, Mikan, Delect. Fl. et Faun. Brasil. 3. t. 3.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 245.

TINANTIA LEIOCALYX, C. B. Clarke in Botan. Gaz. XVIII. 211.—Sepalis extus omnino (aut fere) glabris, sine glandulis; pistillo 12-ovulato; cetera *T. fugaci* Scheidw. similis.

Erect (4 ft.), branching, pubescence of stems scattered; leaves ovate (2½–3½ x 1½–2 in.), acuminate, base rounded or sub-cordate, cuneately produced into petiole, pubescent above; peduncles and pedicels naked, smooth; bracts lanceolate (4 l.), bractlets none; sepals large, oblong, (6–7 x 2 l.), in flower a half longer than pedicels; longer filaments spiral, 2 broadly scarious-alate and albo-arachnoid below middle, the third exarbate, anthers elliptical (1 l.); shorter filaments half as long, aureo-barbate at middle, anthers little smaller and circular. (J. D. S.)

Banks of the Río Samalá, Depart. Retalhuleu, Oct., 1891, No. 695.

TRADESCANTIA CRASSIFOLIA, Cav. Icon. I. 54. t. 75.

Guatemala City, May, 1892, No. 4725.

TRADESCANTIA CUMANENSIS, Kunth, Enum. IV. 96.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 739.

TRADESCANTIA GUATEMALENSIS, C. B. Clarke in Botan. Gaz. XVIII. 210. (EUTRADESCANTIA).—Umbellis sessilibus bibracteatis, corolla intense cœrulea, antherarum loculis ovatis approximatis.

Stems procumbent, rooting at nodes, pubescent on one side; sheathes 4–5 l. long, margins villose; leaves ovate-acuminate or ovate-lanceolate (1½–3 x ½–1 in.), acute, equal at rounded or narrowed base, sub-petiolate, both surfaces glabrous or pilose; bracts foliaceous in form and size, unequal in the pair; pedicels of terminal umbels elongate (16–20 l.), numerous, sparsely villose; sepals oblong (3 x 1 l.), obtuse apex barbate; petals marked with undulate black lines; filaments pilose below, anther-cells adjacent and oblique, minute connective cuneate; capsule globose (2 l.), puberulous, seeds to the cell two and subquadrate, or one and longer, strongly rugose. (J. D. S.)

Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 9,000 ft., July, 1892, No. 3665. Collected also in Guatemala by Heyde & Lux, Santa Rosa, Depart. Santa Rosa, Apr., 1892, and Lago Ayarza, Depart. Jalapa, Sept., 1892, No. 3886.

TRADESCANTIA PULCHELLA, H. B. K. Nov. Gen. et Sp. I. 262?

San Andrés, Depart. Retalhuleu, Guatemala, Nov., 1891, No. 678.

CAMPHELLIA ZANONIA, H. B. K. Nov. Gen. et Sp. I. 264.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 755.

WELDENIA CANDIDA, Schultes f. in Flora (1829) 3. t. 1. A.

Volcán de Agua (floor of crater), Depart. Sacatepéquez, Guatemala, alt. 12,200 ft., June, 1892, No. 2628.

PALMÆ.

CHAMÆDORÆA PACAYA, Erst. in Kjøeb. Vidensk. Meddel. (1858) 12.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 373.

AROIDEÆ.

XANTHOSOMA ROSEUM, Schott in Est. Bot. Zeitschr. (1858) 178.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 165.

CYPERACEÆ.

SCIRPUS RIPARIUS, Presl, Reliq. Hænk. I. 193.

Lago Amatitlán, Depart. Amatitlán, Guatemala, May, 1892, No. 4726.

GRAMINEÆ.

OPLISMENUS HUMBOLDTIANUS, Nees, Agrostol. Brasil. 264.

Volcán Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3672.

ANDROPOGON FASTIGIATUS, Sw. Prodr. Veg. Ind. Occ. 26. (Determ. by Prof. Lamson-Scribner.)

Río Paz, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3674.

MUEHLENBERGIA DIVERSIGLUMIS, Trin. Agrost. II. 52. (Determ. by Dr. Vasey.)

Volcán Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3699.

PERILELEMA CRINITUM, Presl, Reliq. Hænk. I. 233. t. 37. f. a.

Volcán Chingo, Depart. Jutiapa, Guatemala, Oct., 1892, No. 3673.

AGROSTIS TOLUCENSIS, H. B. K. Nov. Gen. et Sp. I. 135. (Determ. by Prof. Lamson-Scribner.)

Volcán Tajumulco, Depart. San Marcos, Guatemala, Jan., 1892, No. 3675.

DEYUUXIA TOLUCENSIS, H. B. K. Nov. Gen. et Sp. I. 143. (Determ. by Dr. Vasey.)

Volcán Tajumulco, Depart. San Marcos, Guatemala, Jan., 1892, No. 324.

FILICES.

ADIANTUM MACROPHYLLUM, Sw. Prodr. 135.

Coatepeque, Depart. San Marcos, Guatemala, Jan., 1892, No. 348.

ASPIDIUM TRIFOLIATUM, Sw. in Schrad. Journ. II. 278.

Tecoluca, Depart. San Vicente, Salvador, Jan., 1893, No. 5069.

NEPHRODIUM AMPLUM, Baker in Hook. et Baker. Syn. Fil. 285.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 249.

NEPHRODIUM CONTERMINUM, Desv. in Mém. Soc. Linn. VI. 255.

Pantaleón, Depart. Escuintla, Guatemala, July, 1891, No. 174.

NEPHROLEPIS CORDIFOLIA, Presl, Tent. 79.

Primavera, Depart. Sololá, Guatemala, Aug., 1891, No. 242.

NEPHROLEPIS EXALTATA, Schott. Gen. Fil. Fasc. I. t. 5.

Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 117.

POLYPODIUM ELASTICUM, Rich. in Ann. Soc. Nat. Hist. 114.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 276.

POLYPODIUM NERIIFOLIUM, Schkuhr, Crypt. 14. t. 15.

Las Ánimas, Depart. Suchitepéquez, Guatemala, Sept., 1891, No. 427.

POLYPODIUM PLEBEIUM, Cham. et Schlecht. in Linnæa, V. 607.

Volcán Pacaya, Depart. Amatitlán, Guatemala, alt. 8,000 ft., July, 1892, No. 3664.

POLYPODIUM PLESIOSORUM, Kunze in Linnæa, XVIII. 313.

San Lorenzo, Depart. San Marcos, Guatemala, Jan., 1892, No. 446.

SELAGINELLACEÆ.

SELAGINELLA GALEOTTII, Spring, Monogr. Lycopod. II. 220.

Primavera, Depart. Sololá, Guatemala, July, 1891, No. 129. Santa Bárbara, Depart. Sololá, Guatemala, Aug., 1891, No. 128.

ALTITUDES ABOVE SEA-LEVEL OF THE LOCALITIES CITED.

Acatenango, Volcán, summit	12,992* feet.	Negro, Río	3,600 feet.
Acatepeque	4,300 "	Nicaragua, Lago de	110* "
Agua, Volcán de, summit	12,311* "	Ochomogo, Río	170 "
Alotenango	4,300 "	Pacaya, Volcán de	8,346* "
Amatenango	2,887* "	Palo Blanco	26* "
Amatitlán, Lago de	3,900 "	Pansamalá	3,800 "
Ánimas, hacienda	651* "	Pantaleón	1,385* "
Ayarza, Lago de	8,000 "	Papelón	30 "
Blanco, Río	9,190 "	Pasaquina	265 "
Bravo, Río	461* "	Patulul	1,095* "
Calel	8,831* "	Patzitzá	7,019* "
Canibal	3,187* "	Paz, Río	1,200 "
Cerro de la Laguna	7,023* "	Primavera	787* "
Chiantla	6,507* "	Retalhuleu	795* "
Chichoy	9,811* "	Rivas	200 "
Chimiente	7,500 "	Samalá, Río, railway bridge	1,118* "
Chinandega	190* "	San Andrés	1,528 "
Chingo	2,231* "	San Bernardo, Río	Sea-level.
Chingo, Volcán de	5,823* "	San Carlos	8,620 feet.
Chocolá	2,708* "	San Carlos Sija	8,623 "
Choluteca, Río	30 "	San Cristóbal Cucho	8,440 "
Coatepeque, Guatemala	1,652* "	San Felipe	2,050 "
Cojutepeque	2,800 "	San Francisco	1,400 "
Colotenango	5,167* "	San José, Dept. Escuintla	Sea-level.
Cuajiniquilapa	2,948* "	San José El Ídolo	578* feet.
Cuilco	3,800* "	San Juan Mixtán	500 "
Cuyotenango	1,100 "	San Lorenzo	9,190 "
Dueñas	4,769* "	San Martín, Dept. Quezaltenango	8,140* "
Eminencia, Barranca de	1,400 "	San Martín, Dept. Retalhuleu	1,500 "
Escuintla	1,108* "	San Martín, Dept. Totonicapam	7,500 "
Flores, Volcán de las	5,242* "	San Miguel Uspantán	6,000 "
Fuego, Volcán de	12,581* "	San Pedro, Depart. Choluteca	124* "
Guacalate, Río	1,000 "	San Pedro, Dept. San Marcos	7,672* "
Guatemala City	4,883* "	San Sebastián	1,022* "
Huahua	4,800 "	Santa Ana	2,103* "
Ilopango	2,060 "	Santa Bárbara	1,406* "
Ilopango, Laguna de	1,370* "	Santa Cruz	200 "
Jiquilisco	250 "	Santa Rosa	3,000 "
Jutiapa	2,926* "	Santa Teresa	2,577* "
La Hacha	1,200 "	Sapoá, Dept. Rivas	110 "
Las Ánimas, Guatemala	651* "	Sapoá, Llanos de	650 "
Las Lajas, Río de	120 "	Serchil	9,560* "
Laure, Río	Sea-level.	Socorro	191 "
Liberia	496* feet.	Soyapango	2,200 "
Limón, Río	140 "	Tajumulco, Volcán, summit	13,814* "
Los Encuentros	8,438* "	Tecoluca	971 "
Masagua	400 "	Tejutla	8,113* "
Maniadero	340 "	Tepetitán	1,852* "
Mazatenango	1,236* "	Triunfo	Sea-level.
Michapa	2,400 "	Usulután	397 feet.
Nahualá, Río	380 "	Virilla, Río	3,200 "
Naranjo	300 "	Yzabal	100 "

NOTE:—The altitudes of the volcanoes refer to their highest points; of towns to their principal *plazas*. Those marked with an asterisk have been determined by instrumental survey; the others are estimated.

